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(54) Title: NOVEL QUINOLINE, TETRAHYDROQUINAZOLINE, AND PYRIMIDINE DERIVATIVES AND METHODS OF  
TREATMENT RELATED TO THE USE THEREOF



(I)

(57) Abstract: The present invention relates to novel compounds of the Formula (I): which act as MCH  
receptor antagonists. These compositions are useful in pharmaceutical compositions whose use in-  
cludes prophylaxis or treatment of improving memory function, sleeping and arousal, anxiety, depres-  
sion, mood disorders, seizure, obesity, diabetes, appetite and eating disorders, cardiovascular disease,  
hypertension, dyslipidemia, myocardial infarction, binge eating disorders including bulimia, anorexia,  
mental disorders including manic depression, schizophrenia, delirium, dementia, stress, cognitive disorders, attention deficit disor-  
der, substance abuse disorders and dyskinesias including Parkinson's disease, epilepsy, and addiction.

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DESCRIPTION  
NOVEL QUINOLINE, TETRAHYDROQUINAZOLINE, AND PYRIMIDINE  
DERIVATIVES AND METHODS OF TREATMENT RELATED  
TO THE USE THEREOF

5

**FIELD OF THE INVENTION**

The present invention relates to compounds which act as antagonists for MCH receptors and to the use of these compounds in pharmaceutical compositions.

**10 BACKGROUND OF THE INVENTION**

Melanin Concentrating Hormone (MCH), a cyclic peptide, has been identified as the endogenous ligand of the orphan G-protein coupled receptor SLC-1. See, for example, Shimomura et al., *Biochem. Biophys. Res. Commun.* 261, 622-26 (1999). Studies have indicated that MCH acts as a neurotransmitter/neuromodulator to alter a number of behavioral responses such as feeding habits.

15 For example, injection of MCH into rats has been reported to increase their consumption of food. Reports indicate that genetically engineered mice which lack MCH show lower body weight and increased metabolism. See Saito et al., *TEM*, vol. 11, 299 (2000). As such, the literature suggests that discovery of MCH antagonists that interact with SCL-1 expressing cells will be useful in developing obesity treatments. See Shimomura et al., *Biochem. Biophys. Res. Commun.* 261, 622-26 (1999).

20 G protein-coupled receptors (GPCRs) share a common structural motif. All these receptors have seven sequences of between 22 to 24 hydrophobic amino acids that form seven alpha helices, each of which spans the membrane. The fourth and fifth transmembrane helices are joined on the extracellular side of the membrane by a strand of amino acids that forms a relatively large loop. Another larger loop, composed primarily of hydrophilic amino acids, joins transmembrane helices  
25 five and six on the intracellular side of the membrane. The carboxy terminus of the receptor lies intracellularly, and the amino terminus lies in the extracellular space. It is thought that the loop joining helices five and six, as well as the carboxy terminus, interact with the G protein. Currently, Gq, Gs, Gi, and Go are G proteins that have been identified as possible proteins that interact with the receptor.

Under physiological conditions, GPCRs exist in the cell membrane in equilibrium between two different states or conformations: an "inactive" state and an "active" state. A receptor in an inactive state is unable to link to the intracellular transduction pathway to produce a biological response. Changing the receptor conformation to the active state allows linkage to the transduction pathway and produces a biological response.

A receptor may be stabilized in an active state by an endogenous ligand or an exogenous agonist ligand. Recent discoveries, including but not exclusively limited to, modifications to the amino acid sequence of the receptor, provide alternative mechanisms other than ligands to stabilize the active state conformation. These approaches effectively stabilize the receptor in an active state by simulating the effect of a ligand binding to the receptor. Stabilization by such ligand-independent approaches is termed "constitutive receptor activation." In contrast, antagonists can competitively bind to the receptor at the same site as agonists, but do not activate the intracellular response initiated by the active form of the receptor, and therefore inhibit the intracellular responses by agonists.

Certain 2-aminoquinazoline derivatives have been reported to be NPY antagonists which are said to be effective in the treatment of disorders and diseases associated with the NPY receptor subtype Y5. See PCT Patent Application 97/20823. Quinazoline derivatives have also been found to be useful by enhancing antitumor activity. See PCT Patent Application 92/07844. And also the quinoline derivatives which have an antagonist activity for MCH receptor are known in these patents, WO03/070244, WO03/105850, WO03/45313, WO03/045920, and WO04/04726.

Recently, our current knowledge of human obesity has advanced dramatically. Previously, obesity was viewed as an oppugnant behavior of inappropriate eating in the setting of appealing foods. Studies of animal models of obesity, biochemical alterations in both humans and animals, and the complex interactions of psychosocial and cultural factors that create receptiveness to human obesity indicate that this disease in humans is multifaceted and deeply entrenched in biologic systems. Thus, it is almost certain that obesity has multiple causes and that there are different types of obesity. Not only does MCHR1 antagonist have potent and durable anti-obesity effects in rodents, it has surprising antidepressant and anxiolytic properties as well (Borowsky et al., *Nature Medicine*, 8, 825-830, 2002). MCHR1 antagonists have been reported to show antidepressant and anxiolytic activities in rodent

models such as social interaction, forced swimming test and ultrasonic vocalization. These findings indicate that MCHR1 antagonists could be useful for treatment of obesity patients with multiple causes. Moreover, MCHR1 antagonists could be used to treat subjects not only with obesity, but also those with depression and anxiety. These advantages make it different from NPY receptor antagonists, with which anxiogenic-like activity can be expected, as NPY itself has anxiolytic-like effect.

Obesity is also regarded as a chronic disease and the possibly of long-term treatment is a concept that is receiving more attention. In this context, it is noteworthy that the depletion of MCH leads to hypophagia as well as leanness (Shimada et al., *Nature*, 396, 670-674, 1998). By contrast, NPY (Erickson et al., *Nature*, 381, 415-418, 1996), as well as the Y1 (Pedrazzini et al., *Nature Medicine*, 4, 722-726, 1998) and Y5 receptors (Marsh et al., *Nature Medicine*, 4, 718-721, 1998), disrupted mice maintained a stable body weight or rather became obese. Considering the above reports, MCHR1 antagonists can be more attractive than Y1 or Y5 receptor antagonists in terms of long-term treatment of obese patients.

Obesity, which is the result of an imbalance between caloric intake and energy expenditure, is highly correlated with insulin resistance and diabetes in experimental animals and human. However, the molecular mechanisms that are involved in obesity-diabetes syndromes are not clear. During early development of obesity, increase insulin secretion balances insulin resistance and protects patients from hyperglycemia (Le Stunff, et al. *Diabetes* 43, 696-702 (1989)). However, after several decades,  $\beta$  cell function deteriorates and non-insulin-dependent diabetes develops in about 20% of the obese population (Pederson, P. *Diab. Metab. Rev.* 5, 505-509 (1989)) and (Brancati, F. L., et al., *Arch. Intern. Med.* 159, 957-963 (1999)). Given its high prevalence in modern societies, obesity has thus become the leading risk factor for NIDDM (Hill, J. O., et al., *Science* 280, 1371-1374 (1998)). However, the factors which predispose a fraction of patients to alteration of insulin secretion in response to fat accumulation remain unknown.

Whether someone is classified as overweight or obese is generally determined on the basis of their body mass index (BMI) which is calculated by dividing body weight (kg) by height squared ( $m^2$ ). Thus, the units of BMI are  $kg/m^2$  and it is possible to calculate the BMI range associated with minimum mortality in each decade of life. Overweight is defined as a BMI in the range 25-30  $kg/m^2$ ,



and obesity as a BMI greater than 30 kg/m<sup>2</sup> (see TABLE below). There are problems with this definition in that it does not take into account the proportion of body mass that is muscle in relation to fat (adipose tissue). To account for this, obesity can also be defined on the basis of body fat content: greater than 25% and 30% in males and females, respectively.

5

CLASSIFICATION OF WEIGHT BY  
BODY MASS INDEX (BMI)

| BMI       | CLASSIFICATION              |
|-----------|-----------------------------|
| < 18.5    | Underweight                 |
| 18.5-24.9 | Normal                      |
| 25.0-29.9 | Overweight                  |
| 30.0-34.9 | Obesity (Class I)           |
| 35.0-39.9 | Obesity (Class II)          |
| >40       | Extreme Obesity (Class III) |

As the BMI increases there is an increased risk of death from a variety of causes that is independent of other risk factors. The most common diseases with obesity are cardiovascular disease (particularly hypertension), diabetes (obesity aggravates the development of diabetes), gall bladder disease (particularly cancer) and diseases of reproduction. Research has shown that even a modest reduction in body weight can correspond to a significant reduction in the risk of developing coronary heart disease.

Compounds marketed as anti-obesity agents include Orlistat (XENICAL<sup>TM</sup>) and Sibutramine. Orlistat (a lipase inhibitor) inhibits fat absorption directly and tends to produce a high incidence of unpleasant (though relatively harmless) side-effects such as diarrhea. Sibutramine (a mixed 5-HT/noradrenaline reuptake inhibitor) can increase blood pressure and heart rate in some patients. The serotonin releaser/reuptake inhibitors fenfluramine (Pondimin<sup>TM</sup>) and dexfenfluramine (Redux<sup>TM</sup>) have been reported to decrease food intake and body weight over a prolonged period

(greater than 6 months). However, both products were withdrawn after reports of preliminary evidence of heart valve abnormalities associated with their use. Accordingly, there is a need for the development of a safer anti-obesity agent.

Obesity considerably increases the risk of developing cardiovascular diseases as well.

- 5 Coronary insufficiency, atheromatous disease, and cardiac insufficiency are at the forefront of the cardiovascular complication induced by obesity. It is estimated that if the entire population had an ideal weight, the risk of coronary insufficiency would decrease by 25% and the risk of cardiac insufficiency and of cerebral vascular accidents by 35%. The incidence of coronary diseases is doubled in subjects less than 50 years of age who are 30% overweight. The diabetes patient faces a
- 10 30% reduced lifespan. After age 45, people with diabetes are about three times more likely than people without diabetes to have significant heart disease and up to five times more likely to have a stroke. These findings emphasize the inter-relations between risks factors for NIDDM and coronary heart disease and the potential value of an integrated approach to the prevention of these conditions based on the prevention of these conditions based on the prevention of obesity (Perry, I. J., et al., *BMJ*
- 15 310, 560-564 (1995)).

- An increasing number of children and adolescents are overweight. Although not all overweight children will necessarily become overweight adults, the growing occurrence of obesity in childhood is likely to be reflected in increasing obesity in adult years. The high prevalence of obesity in our adult population and the likelihood that the nation of the future will be even more obese
- 20 demands a re-examination of the health implications of this disease. See, Health Implications of Obesity. NIH Consens. Statement Online 1985 Feb 11-13; 5(9):1-7.

- “Clinical obesity” is a measurement of the excess body fat relative to lean body mass and is defined as a body weight more than 20% above the ideal body weight. Recent estimates suggest that 1 in 2 adults in the United States is clinically obese, an increase of more than 25% over the past
- 25 decades. Flegal M.D. et al., 22 *Int. J. Obes. Relat. Metab. Disor.* 39 (1998). Both overweight conditions and clinical obesity are a major health concerns worldwide, in particular because clinical obesity is often accompanied by numerous complications, i.e., hypertension and Type II diabetes, which in turn can cause coronary artery disease, stroke, late-stage complications of diabetes and

premature death. (See, e.g., Nishina P.M. et al., 43 *Metab.* 554 (1994)).

Although the etiologic mechanisms underlying obesity require further clarification, the net effect of such mechanisms leads to an imbalance between energy intake and expenditure. Both genetic and environmental factors are likely to be involved in the pathogenesis of obesity. These include  
15 excess caloric intake, decreased physical activity, and metabolic and endocrine abnormalities.

Treatment of overweight conditions and clinical obesity via pharmaceutical agents are not only of importance with respect to the conditions themselves, but also with respect to the possibility of preventing other diseases that are associated with, e.g., clinical obesity, as well as enhancement of the positive feeling of "self" that often accompanies those who are overweight or clinically obese and  
10 who encounter a significant reduction in body weight. Given the foregoing discussion, it is apparent that compounds which help in the treatment of such disorders would be useful and would provide an advance in both research and clinical medicine. The present invention is directed to these, as well as other, important ends.

## 15 SUMMARY OF THE INVENTION

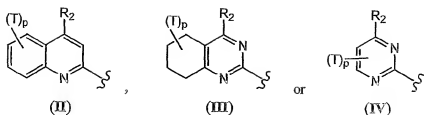
The present invention is drawn to compounds, which bind to and modulate the activity of a GPCR referred to herein as **MCH**, and uses thereof. The term **MCH**, as used herein, includes the human sequences found in GeneBank accession number NM\_005297, naturally-occurring allelic variants, mammalian orthologs, biologically active fragments and recombinant mutants thereof.

20 One aspect of the present invention relates to certain substituted heterocyclic compounds represented by Formula (I):



25 wherein Q is:

7



R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-16</sub> alkyl, and

C<sub>1-16</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•hydroxy,

•oxo,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

••carbocyclic aryl,

••heterocyclyl, and

••heterocyclyl substituted by C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkylcarbonyloxy,

•carbocyclyloxy,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••hydroxy,

••carboxy,

••carbamoyl,

••nitro,

••cyano,

- amino,  
••carbocyclic aryl,  
••carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,  
••C<sub>1-5</sub> alkoxy,  
5 ••C<sub>1-5</sub> alkoxy substituted by halogen,  
••C<sub>1-5</sub> alkyl, and  
••C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from  
the group consisting of:  
•••halogen,  
10 •••hydroxy,  
•••carboxy,  
•••oxo,  
•••mono-C<sub>1-5</sub> alkylamino,  
•••di-C<sub>1-5</sub> alkylamino,  
15 •••mono-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,  
•••di-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,  
•••mono-C<sub>1-5</sub> alkylamino substituted by halogenated  
carbocyclic aryl,  
•••di-C<sub>1-5</sub> alkylamino substituted by halogenated carbocyclic  
20 aryl,  
•••carbocyclic arylcarbonylamino, and  
•••carbocyclic arylcarbonylamino substituted by halogen,  
•heterocycloxy,  
•heterocycloxy substituted by substituent(s) independently selected from  
25 the group consisting of:  
••halogen,  
••hydroxy,  
••carboxy,

- 5                   \*\*carbamoyl,  
                  \*\*nitro,  
                  °°cyano,  
                  °°amino,  
                  \*\*carbocyclic aryl,  
                  \*\*carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,  
                  \*\*C<sub>1-5</sub> alkoxy,  
                  \*\*C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected  
                  from the group consisting of:  
10                   \*\*\*halogen,  
                  \*\*\*hydroxy, and  
                  \*\*\*carboxy,  
                  \*\*C<sub>1-5</sub> alkyl, and  
                  \*\*C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from  
15                   the group consisting of:  
                  \*\*\*halogen,  
                  \*\*\*hydroxy, and  
                  \*\*\*carboxy,  
                  \*substituted heterocyclyl-ethylideneaminoxy,  
20                   \*C<sub>1-5</sub> alkoxy carbonyl,  
                  \*C<sub>1-5</sub> alkoxy carbonyl substituted by carbocyclic aryl,  
                  \*mono-C<sub>1-5</sub> alkylaminocarbonyl,  
                  \*di-C<sub>1-5</sub> alkylaminocarbonyl,  
                  °mono-C<sub>1-5</sub> alkylamino,  
25                   °mono-C<sub>1-5</sub> alkylamino substituted by substituent(s) independently selected  
                  from the group consisting of:  
                  \*\*cyano,  
                  \*\*carbocyclic aryl, and

••heterocyclyl,

•di-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino substituted by substituent(s) independently selected from the group consisting of:

5

••cyano,

••carbocyclic aryl, and

••heterocyclyl,

•mono-carbocyclic arylamino,

•mono-carbocyclic arylamino substituted by substituent(s) independently selected from the group consisting of:

10

••halogen,

••hydroxy,

••carboxy,

••carbamoyl,

15

••nitro,

••cyano,

••amino,

••carbocyclic aryl,

••carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,

20

••C<sub>1-5</sub> alkoxy,

••C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

•••halogen,

•••hydroxy, and

25

•••carboxy,

••C<sub>1-5</sub> alkyl, and

••C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

- \*\*\*halogen,
- \*\*\*hydroxy, and
- \*\*\*carboxy,
- °di-carbocyclic arylamino,
- 5 °di-carbocyclic arylamino substituted by substituent(s) independently selected from the group consisting of:
  - \*\*halogen,
  - \*\*hydroxy,
  - \*\*carboxy,
  - 10 \*\*carbamoyl,
  - \*\*nitro,
  - \*\*cyano,
  - \*\*amino,
  - \*\*carbocyclic aryl,
  - 15 \*\*carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,
  - \*\*C<sub>1-5</sub> alkoxy,
  - \*\*C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:
    - \*\*\*halogen,
    - 20 \*\*\*hydroxy, and
    - \*\*\*carboxy,
    - \*\*C<sub>1-5</sub> alkyl, and
    - \*\*C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
      - 25 °°halogen,
      - °°hydroxy, and
      - \*\*\*carboxy,
      - °mono-heterocyclylamino,



•mono-heterocyclylamino substituted by substituent(s) independently  
selected from the group consisting of:

••halogen,

••hydroxy,

5

••carboxy,

••carbamoyl,

••nitro,

••cyano,

••amino,

10

••carbocyclic aryl,

••carbocyclic aryl substituted by C<sub>1-3</sub> alkoxy,

••C<sub>1-5</sub> alkoxy,

••C<sub>1-3</sub> alkoxy substituted by substituent(s) independently selected  
from the group consisting of:

15

•••halogen,

•••hydroxy, and

•••carboxy,

••C<sub>1-3</sub> alkyl, and

••C<sub>1-3</sub> alkyl substituted by substituent(s) independently selected from  
the group consisting of:

20

•••halogen,

•••hydroxy, and

•••carboxy,

•di-heterocyclylamino,

25

•di-heterocyclylamino substituted by substituent(s) independently selected  
from the group consisting of:

••halogen,

••hydroxy,

- 5                   \*\*carboxy,  
                  \*\*carbamoyl,  
                  °nitro,  
                  °cyano,  
                  \*\*amino,  
                  °carbocyclic aryl,  
                  \*\*carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,  
                  °C<sub>1-5</sub> alkoxy,  
                  \*\*C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected  
10                  from the group consisting of:  
                  \*\*\*halogen,  
                  \*\*\*hydroxy, and  
                  \*\*\*carboxy,  
                  \*\*C<sub>1-5</sub> alkyl, and  
15                  \*\*C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from  
                  the group consisting of:  
                  \*\*\*halogen,  
                  \*\*\*hydroxy, and  
                  \*\*\*carboxy,  
20                  •C<sub>1-5</sub> alkylcarbonylamino,  
                  •C<sub>1-5</sub> alkylcarbonylamino substituted by substituent(s) independently  
                  selected from the group consisting of:  
                  \*\*C<sub>1-5</sub> alkylcarbonylamino,  
                  \*\*carbocyclic arylcarbonylamino, and  
25                  \*\*heterocyclyl,  
                  •C<sub>1-5</sub> alkoxy carbonylamino,  
                  •carbocyclic arylcarbonylamino,  
                  •heterocyclyl carbonylamino,

•carbocyclic arylsulfonylamino,  
•carbocyclic arylsulfonylamino substituted by substituent(s) independently  
selected from the group consisting of:

••nitro,

••C<sub>1-5</sub> alkyl,

••mono-C<sub>1-5</sub> alkylamino, and

••di-C<sub>1-5</sub> alkylamino,

•C<sub>1-5</sub> alkylthio,

•C<sub>1-5</sub> alkylthio substituted by substituent(s) independently selected from the  
group consisting of:

••mono-carbocyclic arylaminocarbonyl,

••mono-carbocyclic arylaminocarbonyl substituted by halogen,

••di-carbocyclic arylaminocarbonyl,

••di-carbocyclic arylaminocarbonyl substituted by halogen,

••mono-carbocyclic arylamino,

••mono-carbocyclic arylamino substituted by halogen,

••di-carbocyclic arylamino,

••di-carbocyclic arylamino substituted by halogen,

••carbocyclic aryl, and

••carbocyclic aryl substituted by substituent(s) independently  
selected from the group consisting of:

•••halogen, and

•••C<sub>1-5</sub> alkoxy,

•carbocyclic arylthio,

•carbocyclic arylthio substituted by substituent(s) independently selected  
from the group consisting of:

••halogen,

••C<sub>1-5</sub> alkyl, and

- C<sub>1-5</sub> alkyl substituted by halogen,  
•carbocyclic arylsulfinyl,  
•carbocyclic arylsulfinyl substituted by substituent(s) independently selected  
from the group consisting of:
- 5                   ••halogen,  
                  ••C<sub>1-5</sub> alkyl, and  
                  ••C<sub>1-5</sub> alkyl substituted by halogen,  
•carbocyclic arylsulfonyl,  
•carbocyclic arylsulfonyl substituted by substituent(s) independently  
10                   selected from the group consisting of:  
                  ••halogen,  
                  ••C<sub>1-5</sub> alkyl, and  
                  ••C<sub>1-5</sub> alkyl substituted by halogen,  
•heterocyclylthio,  
15                   •heterocyclylthio substituted by substituent(s) independently selected from  
the group consisting of:  
                  ••nitro, and  
                  ••C<sub>1-5</sub> alkyl,  
•C<sub>3-6</sub> cycloalkyl,  
20                   •C<sub>3-6</sub> cycloalkyl substituted by C<sub>1-5</sub> alkyl,  
                  •C<sub>3-6</sub> cycloalkyl substituted by carbocyclic aryl,  
                  •C<sub>3-6</sub> cycloalkenyl,  
                  •carbocyclyl,  
                  •carbocyclyl substituted by substituent(s) independently selected from the  
25                   group consisting of:  
                  ••halogen,  
                  ••C<sub>1-5</sub> alkyl,  
                  ••C<sub>1-5</sub> alkoxy,

••C<sub>2-5</sub> alkenyl, and

\*\*C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:

•••carbocyclic aryl, and

\*\*\*carbocyclic aryl substituted by C<sub>1-5</sub> alkylsulfinyl,

\*carbocyclic aryl,

\*carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

- halogen,

••hydroxy,

••carboxy,

••carbamoyl,

••cyano,

 $\bullet\bullet\text{nitro}_3$ 

••amino,

••C<sub>1-5</sub> alkylcarbonylamino,

••C<sub>3-6</sub> cycloalkylcarbonylamino,

••C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from

the group consisting of:

- halogen,

- hydroxy,

...carboxy,

\*\*\*carbamoyl,

•••OXO,

•••carbocyclic aryl,

••heterocyclyl,

- mono-carbocyclic arylamino,

- \*\*\*di-carbocyclic arylamino,  
\*\*\*mono-carbocyclic arylamino substituted by substituent(s)  
independently selected from the group consisting of:
- \*\*\*halogen,
  - \*\*\*nitro,
  - \*\*\*C<sub>1-5</sub> alkyl,
  - \*\*\*C<sub>1-5</sub> alkoxy, and
  - \*\*\*C<sub>1-5</sub> alkoxy substituted by halogen,
- \*\*\*di-carbocyclic arylamino substituted by substituent(s)  
independently selected from the group consisting of:
- \*\*\*halogen,
  - \*\*\*nitro,
  - \*\*\*C<sub>1-5</sub> alkyl,
  - \*\*\*C<sub>1-5</sub> alkoxy, and
  - \*\*\*C<sub>1-5</sub> alkoxy substituted by halogen,
- \*\*C<sub>2-5</sub> alkenyl,  
\*\*C<sub>1-5</sub> alkoxy,  
\*\*C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected  
from the group consisting of:
- \*\*\*halogen, and
  - \*\*\*carbocyclic aryl,
  - \*\*carbocyclic aryloxy,
  - \*\*C<sub>1-5</sub> alkoxycarbonyl,
  - \*\*C<sub>1-5</sub> alkylcarbonyloxy,
- °mono-C<sub>1-5</sub> alkylamino,  
°di-C<sub>1-5</sub> alkylamino,  
\*\*mono-carbocyclic arylamino,  
\*\*mono-carbocyclic arylamino substituted by halogen,

- 5                   ••di-carbocyclic arylamino,  
                  °°di-carbocyclic arylamino substituted by halogen,  
                  °°mono-carbocyclic arylaminocarbonyl,  
                  ••mono-carbocyclic arylaminocarbonyl substituted by substituent(s)  
selected from the group consisting of:
- °°°halogen,  
                  °°°nitro,  
                  °°°C<sub>1-5</sub> alkyl,  
                  °°°C<sub>1-5</sub> alkoxy, and  
10                  °°°C<sub>1-5</sub> alkoxy substituted by halogen,  
                  ••di-carbocyclic arylaminocarbonyl,  
                  ••di-carbocyclic arylaminocarbonyl substituted by substituent(s)  
selected from the group consisting of:
- °halogen,  
15                  ••°nitro,  
                  ••°C<sub>1-5</sub> alkyl,  
                  ••°C<sub>1-5</sub> alkoxy, and  
                  ••°C<sub>1-5</sub> alkoxy substituted by halogen,  
                  ••mercapto,  
20                  ••C<sub>1-5</sub> alkylthio,  
                  ••C<sub>1-5</sub> alkylthio substituted by halogen,  
                  ••C<sub>1-5</sub> alkylsulfonyl,  
                  ••C<sub>3-6</sub> cycloalkyl,  
                  ••carbocyclic aryl, and  
25                  °°heterocyclyl,  
                  •heterocyclyl, and  
                  •heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:

- 5                   ••halogen,  
                  ••hydroxy,  
                  ••carboxy,  
                  ••carbamoyl,  
                  ••cyano,  
                  ••nitro,  
                  ••amino,  
                  ••C<sub>1-5</sub> alkyl,  
10                  ••C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from  
the group consisting of:  
                  •••halogen,  
                  •••hydroxy,  
                  •••carboxy, and  
                  •••carbamoyl,  
15                  ••C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,  
                  ••C<sub>1-5</sub> alkoxy,  
                  ••C<sub>1-5</sub> alkoxy substituted by halogen,  
                  ••C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,  
                  ••carbocyclic aryl, and  
20                  ••carbocyclic aryl substituted by halogen,  
(ii)   C<sub>2-8</sub> alkenyl, and  
C<sub>2-8</sub> alkenyl substituted by substituent(s) independently selected from the  
group consisting of:  
25                  •halogen,  
                  •oxo,  
                  •C<sub>1-5</sub> alkoxy,  
                  •C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,  
                  •carbocyclic aryl,



\*carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

- halogen,
- hydroxy,
- nitro,
- C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkyl substituted by halogen,
- C<sub>1-5</sub> alkoxy, and
- C<sub>1-5</sub> alkoxy substituted by halogen,

\*heterocyclyl, and

\*heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

- hydroxy,
- nitro,
- C<sub>1-5</sub> alkyl, and
- C<sub>1-5</sub> alkoxy,

(iii) C<sub>2-5</sub> alkynyl, and

C<sub>2-5</sub> alkynyl substituted by carbocyclic aryl,

(iv) C<sub>3-12</sub> cycloalkyl, and

C<sub>3-12</sub> cycloalkyl substituted by substituent(s) independently selected from the group consisting of:

- C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

- hydroxy,
- oxo, and
- carbocyclic aryl,

\*mono-C<sub>1-5</sub> alkylamino,

- mono-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,
- di-C<sub>1-5</sub> alkylamino,
- di-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,
- carbocyclic arylcarbonylamino,
- 5      •carbocyclic aryl, and
- carbocyclic aryl substituted by substituent(s) independently selected from  
      the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkoxy,
  - 10      ••C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkyl substituted by halogen,
- (v)    C<sub>3-6</sub> cycloalkenyl, and  
      C<sub>3-6</sub> cycloalkenyl substituted by C<sub>1-5</sub> alkyl,
- (vi)   carbocyclyl, and
- 15      carbocyclyl substituted by substituent(s) independently selected from the  
      group consisting of:
  - hydroxy, and
  - nitro,
- (vii) carbocyclic aryl, and
- 20      carbocyclic aryl substituted by substituent(s) independently selected from the  
      group consisting of:
  - halogen,
  - hydroxy,
  - cyano,
  - 25      •nitro,
  - C<sub>1-10</sub> alkyl,
  - C<sub>1-10</sub> alkyl substituted by substituent(s) independently selected from the  
      group consisting of:

- halogen,
- hydroxy,
- carboxy,
- carbamoyl,
- 5 ••oxo,
- C<sub>1-5</sub> alkoxy,
- carbocyclic aryloxy,
- mono-C<sub>1-5</sub> alkylamino-N-oxy,
- di-C<sub>1-5</sub> alkylamino-N-oxy,
- 10 ••mono-C<sub>1-5</sub> alkylamino,
- di-C<sub>1-5</sub> alkylamino,
- mono-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,
- di-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,
- mono-carbocyclic arylamino,
- 15 ••di-carbocyclic arylamino,
- carbocyclylimino,
- carbocyclylimino substituted by carbocyclic aryl,
- mono-carbocyclic arylamino,
- di-carbocyclic arylamino,
- 20 ••mono-carbocyclic arylamino substituted by C<sub>1-5</sub> alkoxy,
- di-carbocyclic arylamino substituted by C<sub>1-5</sub> alkoxy,
- mono-carbocyclic arylaminocarbonyl,
- di-carbocyclic arylaminocarbonyl,
- mono-carbocyclic arylaminocarbonyl substituted by C<sub>1-5</sub> alkoxy,
- 25 ••di-carbocyclic arylaminocarbonyl substituted by C<sub>1-5</sub> alkoxy,
- carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently  
selected from the group consisting of:

- \*\*\*halogen,
- \*\*C<sub>1-5</sub> alkyl, and
- °°C<sub>1-5</sub> alkyl substituted by halogen,
- °°heterocyclyl, and
- 5 °°heterocyclyl substituted by C<sub>1-5</sub> alkyl,
- C<sub>2-5</sub> alkenyl,
- C<sub>2-5</sub> alkenyl substituted by carbocyclic aryl,
- C<sub>1-9</sub> alkoxy,
- C<sub>1-9</sub> alkoxy substituted by substituent(s) independently selected from the
- 10 group consisting of:
  - hydroxy,
  - halogen,
  - carboxy,
  - mono-C<sub>1-5</sub> alkylamino,
  - 15 ••di-C<sub>1-5</sub> alkylamino,
  - carbocyclic aryl,
  - halogenated carbocyclic aryl,
  - heterocyclyl,
  - heterocyclyl substituted by substituent(s) independently selected
  - 20 from the group consisting of:
    - halogen,
    - heterocyclyl, and
    - heterocyclyl substituted by substituent(s) independently
    - selected from the group consisting of:
      - 25 ••••halogen,
      - C<sub>1-5</sub> alkyl, and
      - C<sub>1-5</sub> alkyl substituted by halogen,
      - C<sub>2-5</sub> alkenyloxy,

•C<sub>3-6</sub> cycloalkoxy,

•C<sub>1-5</sub> alkylcarbonyloxy,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by substituent(s) independently selected

5 from the group consisting of:

••halogen,

••hydroxy,

••carboxy,

••carbamoyl,

10 ••cyano,

••nitro,

••amino,

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from

15 the group consisting of:

•••halogen,

•••hydroxy,

•••carboxy, and

•••carbamoyl,

20 ••C<sub>1-5</sub> alkoxy, and

••C<sub>1-5</sub> alkoxy substituted by halogen,

•heterocyclyloxy,

•heterocyclyloxy substituted by substituent(s) independently selected from

the group consisting of:

25 ••halogen,

••hydroxy,

••carboxy,

••carbamoyl,

- 5                   \*\*cyano,  
                  \*\*nitro,  
                  °°amino,  
                  °°C<sub>1-5</sub> alkyl,  
                  \*\*C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from  
the group consisting of:  
                  \*\*\*halogen,  
                  \*\*\*hydroxy,  
                  \*\*\*carboxy, and  
10                  \*\*\*carbamoyl,  
                  \*\*C<sub>1-5</sub> alkoxy, and  
                  \*\*C<sub>1-5</sub> alkoxy substituted by halogen,  
                  •(carbocyclic aryl)S(O)<sub>2</sub>O,  
                  •carboxy,  
15                  •carbamoyl,  
                  •C<sub>1-5</sub> alkoxy carbonyl,  
                  •mono-C<sub>1-5</sub> alkylaminocarbonyl,  
                  •di-C<sub>1-5</sub> alkylaminocarbonyl,  
                  •mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,  
20                  •di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,  
                  •mono-carbocyclic arylaminocarbonyl,  
                  •di-carbocyclic arylaminocarbonyl,  
                  •mono-carbocyclic arylaminocarbonyl substituted by C<sub>1-5</sub> alkyl,  
                  •di-carbocyclic arylaminocarbonyl substituted by C<sub>1-5</sub> alkyl,  
25                  °°amino,  
                  •mono-C<sub>1-5</sub> alkylamino,  
                  •di-C<sub>1-5</sub> alkylamino,  
                  •mono-C<sub>1-5</sub> alkylamino substituted by cyano,

- di-C<sub>1-5</sub> alkylamino substituted by cyano,
- mono-carbocyclic arylamino,
- di-carbocyclic arylamino,
- C<sub>1-5</sub> alkylcarbonylamino,
- 5 •C<sub>3-6</sub> cycloalkylcarbonylamino,
- C<sub>2-5</sub> alkynylcarbonylamino,
- C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,
- C<sub>1-5</sub> alkoxy carbonylamino,
- carbocyclic arylsulfonylamino,
- 10 •carbocyclic arylsulfonylamino substituted by C<sub>1-5</sub> alkyl,
- (carbocyclic aryl)NHC(O)NH,
- (carbocyclic aryl)NHC(O)NH substituted by C<sub>1-5</sub> alkoxy,
- (carbocyclic aryl)NHC(O)NH substituted by halogenated C<sub>1-5</sub> alkoxy,
- carbocyclic aryl azo,
- 15 •carbocyclic aryl azo substituted by mono-C<sub>1-5</sub> alkylamino,
- carbocyclic aryl azo substituted by di-C<sub>1-5</sub> alkylamino,
- C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by halogen,
- carbocyclic arylthio,
- 20 •carbocyclic arylthio substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - nitro,
  - cyano, and
  - 25 •C<sub>1-5</sub> alkyl,
  - aminosulfonyl,
  - heterocyclithio,
  - C<sub>1-5</sub> alkylsulfonyl,

- mono-C<sub>1-5</sub> alkylaminosulfonyl,
- di-C<sub>1-5</sub> alkylaminosulfonyl,
- heterocyclylsulfonyl,
- C<sub>3-6</sub> cycloalkyl,
- 5      •C<sub>3-6</sub> cycloalkyl substituted by C<sub>1-5</sub> alkyl,
- carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:
  - C<sub>1-7</sub> alkyl, and
  - 10      •C<sub>1-7</sub> alkyl substituted by halogen,
  - heterocyclyl, and
  - heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
    - C<sub>1-5</sub> alkyl,
    - 15      •carbocyclic aryl, and
    - halogenated carbocyclic aryl,
    - C<sub>1-5</sub> alkoxy carbonyl substituted by carbocyclic aryl, and
    - (viii) heterocyclyl, and
    - heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
      - halogen,
      - hydroxy,
      - carboxy,
      - carbamoyl,
      - 25      •cyano,
      - nitro,
      - amino,
      - C<sub>1-5</sub> alkyl,



•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••hydroxy,

5

••carboxy,

••carbamoyl,

••oxo,

••C<sub>1-5</sub> alkylcarbonyloxy,

••carbocyclic arylcarbonylamino,

10

••carbocyclic arylcarbonylamino substituted by halogen,

••C<sub>1-5</sub> alkoxy carbonyl,

••C<sub>1-5</sub> alkylthio,

••C<sub>1-5</sub> alkylthio substituted by carbocyclic aryl,

••C<sub>1-5</sub> alkylthio substituted by halogenated carbocyclic aryl,

15

••carbocyclic aryl,

••carbocyclic aryl substituted by substituent(s) independently

selected from the group consisting of:

•••halogen, and

•••nitro,

20

••heterocyclyl, and

••heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•••halogen,

•••C<sub>1-5</sub> alkyl, and

25

•••C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by halogen,

•C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

\*carbocyclic aryloxy,

\*carbocyclic aryloxy substituted by substituent(s) independently selected

from the group consisting of:

°halogen,

\*\*nitro,

°cyano,

\*\*hydroxy,

\*\*carboxy,

\*\*carbamoyl,

\*\*amino,

\*\*C<sub>1-5</sub> alkyl,

\*\*C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from

the group consisting of:

\*\*\*halogen,

\*\*\*hydroxy,

\*\*\*carboxy, and

\*\*\*carbamoyl,

\*\*mono-C<sub>1-5</sub> alkylamino,

\*\*di-C<sub>1-5</sub> alkylamino,

\*\*C<sub>1-5</sub> alkylcarbonylamino,

\*\*C<sub>3-6</sub> cycloalkylcarbonylamino,

\*\*C<sub>1-5</sub> alkoxy,

\*\*C<sub>1-5</sub> alkoxy substituted by halogen,

\*\*C<sub>3-6</sub> cycloalkyl,

°C<sub>2-5</sub> alkenyl,

°C<sub>2-5</sub> alkynyl,

\*\*carboxy,

\*\*C<sub>1-5</sub> alkoxy carbonyl,

- mono-C<sub>1-5</sub> alkylaminocarbonyl,  
••di-C<sub>1-5</sub> alkylaminocarbonyl,  
••mono-C<sub>3-6</sub> cycloalkylaminocarbonyl,  
••di-C<sub>3-6</sub> cycloalkylaminocarbonyl,  
5 ••mono-C<sub>1-5</sub> alkylaminocarbonylamino,  
••di-C<sub>1-5</sub> alkylaminocarbonylamino,  
••mono-C<sub>3-6</sub> cycloalkylaminocarbonylamino,  
••di-C<sub>3-6</sub> cycloalkylaminocarbonylamino,  
••C<sub>1-5</sub> alkylthio,  
10 ••C<sub>1-5</sub> alkylthio substituted by halogen,  
••C<sub>1-5</sub> alkylsulfinyl,  
••C<sub>1-5</sub> alkylsulfinyl substituted by halogen,  
••C<sub>1-5</sub> alkylsulfonyl, and  
••C<sub>1-5</sub> alkylsulfonyl substituted by halogen,  
15 •heterocycloxy,  
•heterocycloxy substituted by substituent(s) independently selected from  
the group consisting of:  
••halogen,  
••nitro,  
20 ••hydroxy,  
••carboxy,  
••carbamoyl,  
••cyano,  
••amino,  
25 ••C<sub>1-5</sub> alkyl,  
••C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from  
the group consisting of:  
•••halogen,

- \*\*\*hydroxy,
- \*\*\*carboxy, and
- °°°carbamoyl,
- °°C<sub>1-5</sub> alkoxy, and
- 5       \*\*C<sub>1-5</sub> alkoxy substituted by halogen,
- °mono-C<sub>1-5</sub> alkylamino,
- °di-C<sub>1-5</sub> alkylamino,
- °mono-carbocyclic arylamino,
- °mono-carbocyclic arylamino substituted by halogen,
- 10       °C<sub>1-5</sub> alkylcarbonylamino,
- °C<sub>1-5</sub> alkylthio,
- °C<sub>2-5</sub> alkenylthio,
- °carbocyclic arylthio,
- °carbocyclic arylthio substituted by halogen,
- 15       °carbocyclic arylthio substituted by C<sub>1-5</sub> alkoxy carbonyl,
- °heterocyclylthio,
- °heterocyclylthio substituted by C<sub>1-5</sub> alkyl,
- °C<sub>1-5</sub> alkylsulfinyl,
- °C<sub>1-5</sub> alkylsulfonyl,
- 20       °carbocyclic arylsulfinyl,
- °carbocyclic arylsulfinyl substituted by halogen,
- °carbocyclic arylsulfonyl,
- °carbocyclic arylsulfonyl substituted by substituent(s) independently  
selected from the group consisting of:
- 25       °°halogen,
- °°C<sub>1-5</sub> alkoxy,
- °°C<sub>1-5</sub> alkyl, and
- °°C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy carbonyl,  
 •C<sub>1-5</sub> alkoxy carbonyl substituted by carbocyclic aryl,  
 •carbocyclic aryl,  
 •carbocyclic aryl substituted by substituent(s) independently selected from  
 5 the group consisting of:

••halogen,  
 ••nitro,  
 ••C<sub>1-5</sub> alkyl,  
 ••C<sub>1-5</sub> alkyl substituted by halogen,  
 10 ••C<sub>1-5</sub> alkoxy, and  
 ••C<sub>1-5</sub> alkoxy substituted by halogen,  
 •heterocyclyl, and  
 •heterocyclyl substituted by substituent(s) independently selected from the  
 group consisting of:

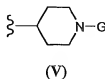
15 ••halogen,  
 ••C<sub>1-5</sub> alkyl,  
 ••C<sub>1-5</sub> alkyl substituted by halogen,  
 ••C<sub>1-5</sub> alkoxy, and  
 ••C<sub>1-5</sub> alkoxy carbonyl;

20 R<sub>2</sub> is selected from the group consisting of:

hydrogen, halogen, hydroxy, carboxy, carbamoyl, amino, C<sub>1-5</sub> alkyl, C<sub>1-5</sub>  
 alkyl substituted by halogen, C<sub>1-5</sub> alkyl substituted by hydroxy, C<sub>1-5</sub> alkyl substituted  
 by carboxy, C<sub>1-5</sub> alkyl substituted by carbamoyl, C<sub>1-5</sub> alkoxy, C<sub>1-5</sub> alkoxy substituted  
 25 by halogen, -NHNH<sub>2</sub>, -NHNHBoC, -N(R<sub>2a</sub>)(R<sub>2b</sub>), morpholino, 4-acetyl-piperazyl, or  
 4-phenyl-piperazyl,

wherein R<sub>2a</sub> is hydrogen or C<sub>1-5</sub> alkyl and R<sub>2b</sub> is C<sub>1-5</sub> alkyl, C<sub>3-6</sub> cycloalkyl, or C<sub>1-5</sub> alkyl  
 substituted by substituent(s) independently selected from the group consisting of:

- halogen,
- hydroxy,
- carboxy,
- carbamoyl,
- 5 •C<sub>1-5</sub> alkoxy,
- amino,
- NHBoc,
- C<sub>3-6</sub> cycloalkyl,
- carbocyclic aryl,
- 10 •carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkoxy, and
  - 15 ••-SO<sub>2</sub>NH<sub>2</sub>,
  - heterocyclyl, and
- C<sub>3-6</sub> cycloalkyl, carbocyclic aryl, carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - 20 •C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkoxy, and
  - a group of Formula (V):



25

wherein Boc is carbamic acid *tert*-butyl ester and G is C<sub>1-5</sub> alkyl or C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl,

•halogenated carbocyclic aryl, and

•carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy;

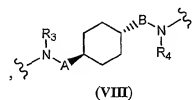
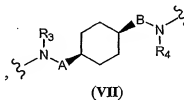
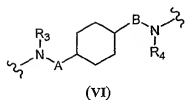
or R<sub>2</sub> is methylamino or dimethylamino when Q is Formula (II) and Y is a single bond

or -CH<sub>2</sub>-;

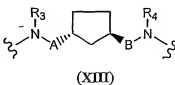
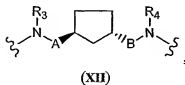
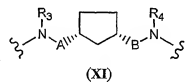
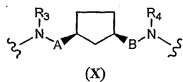
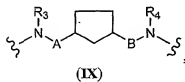
Each T is independently selected from the group consisting of halogen, hydroxy, carboxy, carbamoyl, amino, cyano, nitro, C<sub>1-5</sub> alkyl, C<sub>1-5</sub> alkyl substituted by halogen, C<sub>1-5</sub> alkyl substituted by hydroxy, C<sub>1-5</sub> alkyl substituted by carboxy, C<sub>1-5</sub> alkyl substituted by carbamoyl, C<sub>2-5</sub> alkenyl, C<sub>2-5</sub> alkynyl, C<sub>3-6</sub> cycloalkyl, C<sub>1-5</sub> alkoxy, C<sub>1-5</sub> alkoxy substituted by halogen, carbocyclic aryl, heterocyclyl, and -N(R<sub>2a</sub>)(R<sub>2b</sub>);

p is 0, 1, 2, 3, 4 or 5;

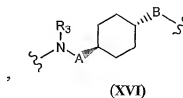
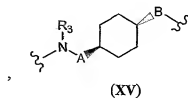
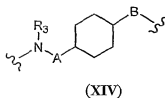
L is selected from the group consisting of Formulae (VI) to (XXI):

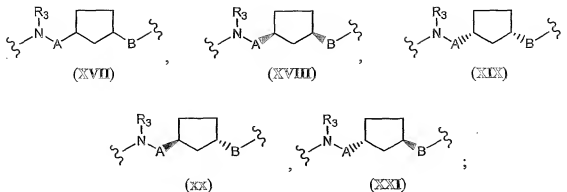


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wherein  $R_3$  and  $R_4$  are independently hydrogen or  $C_{1-5}$  alkyl; and A and B are independently a single bond,  $-CH_2-$ , or  $-(CH_2)_2-$ ;

and

Y represents:

- 10 (i)  $-C(O)NR_5-$ ,  $-C(S)NR_5-$ ,  $-C(O)O-$ ,  $-S(O)_2-$ ,  $-C(O)-$ ,  $-C(S)-$ , a single bond, or  $-CH_2-$  when L is selected from the group consisting of Formulae (VI) to (XIII); or
- (ii)  $-C(O)NR_5-$ ,  $-C(S)NR_5-$ ,  $-C(O)O-$  or  $-OC(O)-$  when L is selected from the group consisting of Formulae (XIV) to (XXI);

- 15 wherein  $R_5$  is hydrogen or  $C_{1-5}$  alkyl, or when Y is  $-C(O)NR_5-$  then  $R_5$  and  $R_1$  together with the nitrogen they are bonded form a heterocyclyl group;

wherein carbocyclic aryl is phenyl, naphthyl, anthranyl, phenanthryl, or biphenyl;

- 20 carbocyclic is 10,11-dihydro-5-oxo-dibenzo[a,d]cycloheptyl, 1-oxo-indanyl, 7,7-dimethyl-2-oxo-bicyclo[2.2.1]heptyl, 9H-fluorenyl, 9-oxo-fluorenyl, acenaphthyl, anthraquinonyl, C-fluoren-9-ylidene, indanyl, indenyl, 1,2,3,4-tetrahydro-naphthyl, or bicyclo[2.2.1]heptenyl;

- heterocyclyl is 1,2,3,4-tetrahydro-isoquinolyl, 1,2,3-thiadiazolyl, 1,2,3-triazolyl, 1,2-dihydro-3-oxo-pyrazolyl, 1,3,4-thiadiazolyl, 1,3-dioxo-isoindolyl,
- 25



- 1,3-dioxolanyl, 1*H*-indolyl, 1*H*-pyrrolo[2,3-*c*]pyridyl, 1*H*-pyrrolyl,  
 1-oxo-3*H*-isobenzofuranyl, 2,2',5',2"-terthiophenyl, 2,2'-bithiophenyl,  
 2,3-dihydro-1-oxo-isoidolyl, 2,3-dihydro-benzo[1,4]dioxinyl,  
 2,3-dihydro-benzofuryl, 2,4-dihydro-3-oxo-pyrazolyl, 2*H*-benzopyranyl,  
 2-oxo-benzopyranyl, 2-oxo-pyrrolidinyl, 3,4-dihydro-2*H*-benzo[1,4]oxazinyl,  
 3,4-dihydro-2*H*-benzo[*b*][1,4]dioxepinyl, 4*H*-benzo[1,3]dioxinyl, 4*H*-benzopyranyl,  
 4-oxo-1,5,6,7-tetrahydro-indolyl, 4-oxo-3,4-dihydro-phthalazinyl,  
 4-oxo-benzopyranyl, 9,10,10-trioxo-thioxanthenyl, 9*H*-carbazolyl, 9*H*-xanthenyl,  
 azetidiny, benzimidazolyl, benzo[1,3]dioxolyl, benzo[2,1,3]oxadiazolyl,  
 benzo[1,2,5]oxadiazolyl, benzo[*b*]thienyl, benzofuryl, benzothiazolyl, cinnolyl, furyl,  
 imidazo[2,1-*b*]thiazolyl, imidazolyl, isoxazolyl, morpholino, morpholinyl, oxazolyl,  
 oxolanyl, piperazyl, piperidyl, piridyl, pyrazolo[5,1-*b*]thiazolyl, pyrazolyl, pyrazinyl,  
 pyridyl, pyrimidyl, pyrrolidyl, quinolyl, quinoxalyl, thiazolidyl, thiazolyl, thienyl,  
 thiolanyl, 2,3-dihydro-benzofuryl, tetrahydro-thienyl, or benzofuranyl; and  
 halogen is fluoro, chloro, bromo, or iodo;  
 or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

One aspect of the present invention pertains to pharmaceutical compositions comprising at least one compound, as described herein, in combination with a pharmaceutically acceptable carrier.

- One aspect of the present invention pertains to methods for the prophylaxis or treatment of  
 improving memory function, sleeping and arousal, anxiety, depression, mood disorders, seizure,  
 obesity, diabetes, appetite and eating disorders, cardiovascular disease, hypertension, dyslipidemia,  
 myocardial infarction, binge eating disorders including bulimia, anorexia, mental disorders including  
 manic depression, schizophrenia, delirium, dementia, stress, cognitive disorders, attention deficit  
 disorder, substance abuse disorders and dyskinesias including Parkinson's disease, epilepsy, and  
 addiction comprising administering to an individual suffering from said condition a therapeutically  
 effective amount of a compound, as described herein, or a pharmaceutical composition thereof.

One aspect of the present invention pertains to methods for the prophylaxis or treatment of an eating disorder, obesity or an obesity related disorder comprising administering to an individual

suffering from the condition a therapeutically effective amount of a compound, as described herein, or a pharmaceutical composition thereof.

One aspect of the present invention pertains to methods for the prophylaxis or treatment of anxiety, depression, schizophrenia, addiction, or epilepsy comprising administering to an individual  
5 suffering from the condition a therapeutically effective amount of a compound, as described herein, or a pharmaceutical composition.

One aspect of the present invention pertains to compounds of the present invention, as described herein, or a pharmaceutical composition thereof, for use in a method of treatment of the human or animal body by therapy.

10 One aspect of the present invention pertains to compounds of the present invention, as described herein, or a pharmaceutical composition thereof, for use in a method of prophylaxis or treatment of an eating disorder, obesity or an obesity related disorder of the human or animal body by therapy.

One aspect of the present invention pertains to compounds of the present invention, as  
15 described herein, or a pharmaceutical composition thereof, for use in a method of prophylaxis or treatment of anxiety, depression, schizophrenia, addiction, or epilepsy of the human or animal body by therapy.

One aspect of the present invention pertains to compounds of the present invention, as described herein, for the manufacture of a medicament for use in the prophylaxis or treatment of an  
20 eating disorder, obesity or obesity related disorders.

One aspect of the present invention pertains to compounds of the present invention, as described herein, for the manufacture of a medicament for use in the prophylaxis or treatment of anxiety, depression, schizophrenia, addiction, or epilepsy.

One aspect of the present invention pertains to methods of decreasing food intake of an  
25 individual comprising administering to the individual a therapeutically effective amount of a compound, as described herein, or a pharmaceutical composition thereof.

One aspect of the present invention pertains to methods of inducing satiety in an individual comprising administering to said individual a therapeutically effective amount of a compound, as

described herein, or a pharmaceutical composition thereof.

One aspect of the present invention pertains to methods of controlling or reducing weight gain in an individual comprising administering to said individual a therapeutically effective amount of a compound, as described herein, or a pharmaceutical composition thereof.

- 5        One aspect of the present invention pertains to methods of modulating a MCH receptor in an individual comprising contacting the receptor with a compound, as described herein. In some embodiments, the compound is an antagonist. In some embodiments, the modulation of the MCH receptor is for the prophylaxis or treatment of an eating disorder, obesity or obesity related disorder. In some embodiments, the modulation of the MCH receptor reduces food intake of the individual. In some embodiments, the modulation of the MCH receptor induces satiety in the individual. In some  
10        embodiments, the modulation of the MCH receptor controls or reduces weight gain of the individual. In some embodiments, the modulation of the MCH receptor is for prophylaxis or treatment of anxiety, depression, schizophrenia, addiction, or epilepsy.

In some embodiments, the individual is a mammal.

- 15        In some embodiments, the mammal is a human.

In some embodiments, the human has a body mass index of about 18.5 to about 45. In some embodiments, the human has a body mass index of about 25 to about 45. In some embodiments, the human has a body mass index of about 30 to about 45. In some embodiments, the human has a body mass index of about 35 to about 45.

- 20        One aspect of the present invention pertains to methods of producing a pharmaceutical composition comprising admixing a compound, as described herein, and a pharmaceutically acceptable carrier.

This application claims priority to US Provisional Patent Applications, Serial No. 60/458,530, filed March 31, 2003; Serial No. 60/495,911, filed August 19, 2003; Serial 60/510,186, filed October  
25        9, 2003; and Serial No. 60/530,360, filed December 16, 2003; all of which are incorporated herein by reference in their entirety.

## DETAILED DESCRIPTION OF THE INVENTION

One aspect of the present invention relates to certain substituted heterocyclic compounds represented by Formula (I):



(I)

or a pharmaceutically acceptable salt, hydrate or solvate thereof, wherein Q, L, Y, and R<sub>1</sub> are as described herein, *supra* and *infra*.

It is appreciated that certain features of the invention, which are, for clarity, described in the context of separate embodiments, may also be provided in combination in a single embodiment.

- 10 Conversely, various features of the invention which are, for brevity, described in the context of a single embodiment, may also be provided separately or in any suitable subcombination.

In some embodiments of the present invention, R<sub>2</sub> is selected from the group consisting of:

- hydrogen, halogen, hydroxy, carboxy, carbamoyl, amino, C<sub>1-5</sub> alkyl substituted by hydroxy, C<sub>1-5</sub> alkyl substituted by carboxy, C<sub>1-5</sub> alkyl substituted by carbamoyl, C<sub>1-5</sub> alkoxy, C<sub>1-5</sub> alkoxy substituted by halogen, -NHNH<sub>2</sub>, -NHNHBoc, -N(R<sub>2a</sub>)(R<sub>2b</sub>), morpholino, 4-acetyl-piperazyl, or 4-phenyl-piperazyl,
- 15

wherein R<sub>2a</sub> is hydrogen or C<sub>1-5</sub> alkyl and R<sub>2b</sub> is C<sub>1-5</sub> alkyl, C<sub>3-6</sub> cycloalkyl, or C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

- halogen,
- 20 •hydroxy,
- carboxy,
- carbamoyl,
- C<sub>1-5</sub> alkoxy,
- amino,
- 25 •-NHBoc,
- C<sub>3-6</sub> cycloalkyl,
- carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•C<sub>1-5</sub> alkyl,

5

•C<sub>1-5</sub> alkoxy, and

•-SO<sub>2</sub>NH<sub>2</sub>,

•heterocyclyl, and

C<sub>3-6</sub> cycloalkyl, carbocyclic aryl, carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

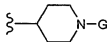
10

•halogen,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkoxy, and

•a group of Formula (V):



15

(V)

wherein Boc is carbamic acid *tert*-butyl ester and G is C<sub>1-5</sub> alkyl or C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl,

20

•halogenated carbocyclic aryl, and

•carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy.

In some embodiments of the present invention, R<sub>2</sub> is -N(R<sub>2a</sub>)(R<sub>2b</sub>), wherein R<sub>2a</sub> is hydrogen or C<sub>1-5</sub> alkyl and R<sub>2b</sub> is C<sub>1-5</sub> alkyl, C<sub>3-6</sub> cycloalkyl, or C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

25

•halogen,

•hydroxy,

•carboxy,

•carbamoyl,

•C<sub>1-5</sub> alkoxy,

•amino,

•-NHBoc,

5 •C<sub>3-6</sub> cycloalkyl,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

10 ••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkoxy, and

••-SO<sub>2</sub>NH<sub>2</sub>,

•heterocyclyl, and

C<sub>3-6</sub> cycloalkyl, carbocyclic aryl, carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

15

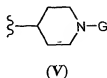
•halogen,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkoxy, and

•a group of Formula (V):

20



wherein Boc is carbamic acid *tert*-butyl ester and G is C<sub>1-5</sub> alkyl or C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

25 •carbocyclic aryl,

•halogenated carbocyclic aryl, and

•carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy.

In some embodiments of the present invention,  $R_2$  is  $-N(R_{2a})(R_{2b})$ , wherein  $R_{2a}$  is hydrogen or  $C_{1-5}$  alkyl and  $R_{2b}$  is  $C_{1-5}$  alkyl or  $C_{3-6}$  cycloalkyl.

In some embodiments of the present invention,  $R_1$  is selected from the group consisting of:

- (i)  $C_{1-8}$  alkyl, and
- 5  $C_{1-8}$  alkyl substituted by substituent(s) independently selected from the group consisting of:
- halogen,
  - oxo,
  - $C_{1-5}$  alkoxy,
  - 10 • $C_{1-5}$  alkoxy substituted by carbocyclic aryl,
  - $C_{1-5}$  alkylcarbonyloxy,
  - carbocyclic aryloxy,
  - carbocyclic aryloxy substituted by substituent(s) independently selected from the group consisting of:
  - 15 ••halogen,
  - nitro,
  - $C_{1-5}$  alkyl, and
  - $C_{1-5}$  alkoxy,
  - heterocyclyloxy,
  - 20 •heterocyclyloxy substituted by  $C_{1-5}$  alkyl,
  - $C_{1-5}$  alkoxycarbonyl,
  - mono- $C_{1-5}$  alkylaminocarbonyl,
  - di- $C_{1-5}$  alkylaminocarbonyl,
  - mono- $C_{1-5}$  alkylamino,
  - 25 •mono- $C_{1-5}$  alkylamino substituted by cyano,
  - mono- $C_{1-5}$  alkylamino substituted by carbocyclic aryl,
  - di- $C_{1-5}$  alkylamino,
  - di- $C_{1-5}$  alkylamino substituted by cyano,

- di-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,
- mono-carbocyclic arylamino,
- mono-carbocyclic arylamino substituted by halogen,
- mono-carbocyclic arylamino substituted by C<sub>1-5</sub> alkyl,
- 5     •di-carbocyclic arylamino,
- di-carbocyclic arylamino substituted by halogen,
- di-carbocyclic arylamino substituted by C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkoxycarbonylamino,
- carbocyclic arylcarbonylamino,
- 10     •carbocyclic arylsulfonylamino,
- carbocyclic arylsulfonylamino substituted C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by substituent(s) independently selected from the  
group consisting of:
- 15         ••carbocyclic aryl,
- carbocyclic aryl substituted by halogen, and
- carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,
- carbocyclic arylthio,
- heterocyclylthio,
- 20     •heterocyclylthio substituted by nitro,
- heterocyclylthio substituted by C<sub>1-5</sub> alkyl,
- C<sub>3-6</sub> cycloalkyl,
- C<sub>3-6</sub> cycloalkenyl,
- carbocyclyl,
- 25     •carbocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
- halogen,
- C<sub>1-5</sub> alkyl,



- C<sub>1-5</sub> alkoxy,
- C<sub>2-5</sub> alkenyl, and
- C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:
  - carbocyclic aryl, and
  - carbocyclic aryl substituted by C<sub>1-5</sub> alkylsulfinyl,
- carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - hydroxy,
  - nitro,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
    - oxo,
    - carbocyclic aryl, and
    - heterocyclyl,
  - C<sub>2-5</sub> alkenyl,
- C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkoxy substituted by halogen,
- C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,
- carbocyclic aryloxy,
- mono-carbocyclic arylaminocarbonyl,
- mono-carbocyclic arylaminocarbonyl substituted by halogen,
- di-carbocyclic arylaminocarbonyl,
- di-carbocyclic arylaminocarbonyl substituted by halogen,
- carbocyclic aryl, and

- heterocyclyl,  
•heterocyclyl, and  
•heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
- 5                   ••C<sub>1-5</sub> alkyl,  
                  ••C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,  
                  ••C<sub>1-5</sub> alkoxy,  
                  ••C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,  
                  ••carbocyclic aryl, and  
10                  ••carbocyclic aryl substituted by halogen,
- (ii)   C<sub>2-7</sub> alkenyl, and  
      C<sub>2-7</sub> alkenyl substituted by substituent(s) independently selected from the  
group consisting of:  
      •carbocyclic aryl,  
15       •carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:  
          ••halogen,  
          ••nitro, and  
          ••C<sub>1-5</sub> alkoxy,
- 20       (iii)   C<sub>2-5</sub> alkynyl, and  
          C<sub>2-5</sub> alkynyl substituted by carbocyclic aryl,
- (iv)   C<sub>3-12</sub> cycloalkyl, and  
      C<sub>3-12</sub> cycloalkyl substituted by substituent(s) independently selected from the  
group consisting of:
- 25               ••C<sub>1-5</sub> alkyl,  
                  ••C<sub>1-5</sub> alkyl substituted by oxo,  
                  ••C<sub>1-5</sub> alkyl substituted by carbocyclic aryl, and  
                  •carbocyclic aryl,

(v) carbocyclyl,

(vi) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

5

•halogen,

•hydroxy,

•cyano,

•nitro,

•carboxy,

10

•carbamoyl,

•C<sub>1-10</sub> alkyl,

•C<sub>1-10</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

15

••halogen,

••hydroxy,

••oxo,

••carbocyclic aryloxy,

••carbocyclic aryl, and

••carbocyclic aryl substituted by C<sub>1-5</sub> alkyl,

20

•C<sub>1-7</sub> alkoxy,

•C<sub>1-7</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••carbocyclic aryl, and

25

••halogenated carbocyclic aryl,

•C<sub>2-5</sub> alkenyloxy,

•C<sub>3-6</sub> cycloalkoxy,

•carbocyclic aryloxy,

- carbocyclic aryloxy substituted by nitro,
- carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkoxycarbonyl,
- mono-C<sub>1-5</sub> alkylaminocarbonyl,
- 5     •di-C<sub>1-5</sub> alkylaminocarbonyl,
- mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
- di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
- amino,
- mono-C<sub>1-5</sub> alkylamino,
- 10     •di-C<sub>1-5</sub> alkylamino,
- mono-C<sub>1-5</sub> alkylamino substituted by cyano,
- di-C<sub>1-5</sub> alkylamino substituted by cyano,
- C<sub>2-5</sub> alkynylcarbonylamino,
- C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,
- 15     •C<sub>1-5</sub> alkoxycarbonylamino,
- (carbocyclic aryl)NHC(O)NH,
- (carbocyclic aryl)NHC(O)NH substituted by C<sub>1-5</sub> alkoxy,
- (carbocyclic aryl)NHC(O)NH substituted by halogenated C<sub>1-5</sub> alkoxy,
- carbocyclic aryl azo,
- 20     •carbocyclic aryl azo substituted by mono-C<sub>1-5</sub> alkylamino,
- carbocyclic aryl azo substituted by di-C<sub>1-5</sub> alkylamino,
- C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by halogen,
- carbocyclic arylthio,
- 25     •carbocyclic arylthio substituted by nitro,
- carbocyclic arylthio substituted by cyano,
- aminosulfonyl,
- mono-C<sub>1-5</sub> alkylaminosulfonyl,

- di- $C_{1-5}$  alkylaminosulfonyl,
- heterocyclylsulfonyl,
- $C_{3-6}$  cycloalkyl,
- $C_{3-6}$  cycloalkyl substituted by  $C_{1-5}$  alkyl,
- 5   •carbocyclic aryl,
- heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the  
     group consisting of:
  - $C_{1-5}$  alkyl,
  - 10   ••carbocyclic aryl, and
  - halogenated carbocyclic aryl,
- (vii) heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the  
     group consisting of:
  - 15   •halogen,
  - nitro,
  - amino,
  - hydroxy,
  - $C_{1-5}$  alkyl,
  - 20   • $C_{1-5}$  alkyl substituted by substituent(s) independently selected from the  
     group consisting of:
    - halogen,
    - hydroxy,
    - $C_{1-5}$  alkylthio,
    - 25   •• $C_{1-5}$  alkylthio substituted by carbocyclic aryl,
    - $C_{1-5}$  alkylthio substituted by halogenated carbocyclic aryl,
    - carbocyclic aryl,
    - carbocyclic aryl substituted by halogen, and

- heterocyclyl,
  - C<sub>1-5</sub> alkoxy,
  - carbocyclic aryloxy,
  - carbocyclic aryloxy substituted by halogen,
  - 5 •carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,
  - carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
  - mono-C<sub>1-5</sub> alkylamino,
  - di-C<sub>1-5</sub> alkylamino,
  - C<sub>1-5</sub> alkylthio,
  - 10 •C<sub>2-5</sub> alkenylthio,
  - carbocyclic arylthio,
  - carbocyclic arylthio substituted by C<sub>1-5</sub> alkoxycarbonyl,
  - C<sub>1-5</sub> alkylsulfonyl,
  - carbocyclic arylsulfonyl,
  - 15 •carbocyclic arylsulfonyl substituted by C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkoxycarbonyl,
  - C<sub>1-5</sub> alkoxycarbonyl substituted by carbocyclic aryl,
  - carbocyclic aryl,
  - carbocyclic aryl substituted by substituent(s) independently selected from
  - 20 the group consisting of:
    - halogen,
    - nitro,
    - C<sub>1-5</sub> alkyl, and
    - C<sub>1-5</sub> alkyl substituted by halogen,
  - 25 •heterocyclyl;
- wherein carbocyclic aryl is phenyl, naphthyl, or anthranlyl;  
 carbocyclyl is 1,2,3,4-tetrahydronaphthyl, 1-oxo-indanyl, 9-fluorenyl,  
 9H-fluorenyl, 9-oxo-9H-fluorenyl, adamantly, bicyclo[2.2.1]heptenyl,

bicyclo[2.2.1]heptyl, indanyl, indenyl, or menthyl;

heterocyclyl is 1,2,3-triazolyl, 1*H*-indolyl, 1*H*-pyrrolyl,

2,3-dihydro-1-oxo-isoindolyl, 2,3-dihydro-benzo[1,4]dioxinyl,

2,3-dihydro-benzofuryl, 2,4-dihydro-3-oxo-pyrazolyl, 2*H*-benzopyranyl,

5 2-oxo-benzopyranyl, 3,4-dihydro-2*H*-benzo[b][1,4]dioxepinyl,

4,5,6,7-tetrahydro-benzo[b]thienyl, 4*H*-benzo[1,3]dioxinyl,

4-oxo-1,5,6,7-tetrahydro-indolyl, 4-oxo-benzopyranyl, 9*H*-carbazolyl, 9*H*-xanthenyl,

azetidiny, benzo[1,3]dioxolyl, benzo[2,1,3]oxadiazolyl, benzo[1,2,5]oxadiazolyl,

benzo[2,1,3]thiadiazolyl, benzo[b]thienyl, benzofuryl, benzothiazolyl, furyl,

10 imidazo[2,1-*b*]thiazolyl, imidazolyl, isoxazolyl, morpholino, morpholinyl, oxazolyl,

phenanthro[9,10-*d*]oxazolyl, piperidyl, pyrazolyl, pyridyl, pyrimidyl, quinolyl,

quinoxalyl, tetrahydrofuryl, thiazolyl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

15 In some embodiments of the present invention, Q is Formula (II);

R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-8</sub> alkyl, and

C<sub>1-8</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

20 •halogen,

•oxo,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

•C<sub>1-5</sub> alkylcarbonyloxy,

25 •carbocyclic aryloxy,

•carbocyclic aryloxy substituted by halogen,

•carbocyclic aryloxy substituted by nitro,

•heterocyclyloxy,

- heterocyclyloxy substituted by C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkoxy carbonyl,
- mono-C<sub>1-5</sub> alkylaminocarbonyl,
- di-C<sub>1-5</sub> alkylaminocarbonyl,
- 5 •mono-C<sub>1-5</sub> alkylamino,
- mono-C<sub>1-5</sub> alkylamino substituted by cyano,
- mono-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,
- di-C<sub>1-5</sub> alkylamino,
- di-C<sub>1-5</sub> alkylamino substituted by cyano,
- 10 •di-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,
- mono-carbocyclic arylamino,
- di-carbocyclic arylamino,
- C<sub>1-5</sub> alkoxy carbonylamino,
- carbocyclic arylcarbonylamino,
- 15 •carbocyclic arylsulfonylamino,
- carbocyclic arylsulfonylamino substituted C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by substituent(s) independently selected from the  
group consisting of:
  - 20 ••carbocyclic aryl,
  - carbocyclic aryl substituted by halogen, and
  - carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,
- carbocyclic arylthio,
- heterocyclylthio,
- 25 •heterocyclylthio substituted by C<sub>1-5</sub> alkyl,
- C<sub>3-6</sub> cycloalkyl,
- C<sub>3-6</sub> cycloalkenyl,
- carbocyclyl,



•carbocyclyl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••C<sub>1-3</sub> alkyl,

5 ••C<sub>1-3</sub> alkoxy,

••C<sub>2-3</sub> alkenyl, and

••C<sub>2-3</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:

•••carbocyclic aryl, and

10 •••carbocyclic aryl substituted by C<sub>1-3</sub> alkylsulfinyl,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

15 ••hydroxy,

••nitro,

••C<sub>1-3</sub> alkyl,

••C<sub>1-3</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

20 •••oxo,

•••carbocyclic aryl, and

••heterocyclyl,

••C<sub>2-3</sub> alkenyl,

••C<sub>1-3</sub> alkoxy,

25 ••C<sub>1-3</sub> alkoxy substituted by halogen,

••C<sub>1-3</sub> alkoxy substituted by carbocyclic aryl,

••carbocyclic aryloxy,

••mono-carbocyclic arylaminocarbonyl,

- \*\*mono-carbocyclic arylaminocarbonyl substituted by halogen,  
 \*\*di-carbocyclic arylaminocarbonyl,  
 °°di-carbocyclic arylaminocarbonyl substituted by halogen,  
 \*\*carbocyclic aryl, and  
 5       \*\*heterocyclyl,  
       °heterocyclyl, and  
       \*heterocyclyl substituted by substituent(s) independently selected from the  
       group consisting of:  
           \*\*C<sub>1-3</sub> alkyl,  
 10       \*\*C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,  
           \*\*C<sub>1-5</sub> alkoxy,  
           \*\*C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,  
           \*\*carbocyclic aryl, and  
           \*\*carbocyclic aryl substituted by halogen,  
 15       (ii) C<sub>2-7</sub> alkenyl, and  
           C<sub>2-7</sub> alkenyl substituted by substituent(s) independently selected from the  
           group consisting of:  
           \*carbocyclic aryl,  
           \*carbocyclic aryl substituted by substituent(s) independently selected from  
 20       the group consisting of:  
           \*\*halogen,  
           \*\*nitro, and  
           \*\*C<sub>1-5</sub> alkoxy,  
       (iii) C<sub>2-5</sub> alkynyl, and  
 25       C<sub>2-5</sub> alkynyl substituted by carbocyclic aryl,  
       (iv) C<sub>3-6</sub> cycloalkyl, and  
           C<sub>3-6</sub> cycloalkyl substituted by substituent(s) independently selected from the  
           group consisting of:

- C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by oxo,
  - C<sub>1-5</sub> alkyl substituted by carbocyclic aryl, and
  - carbocyclic aryl,
- 5 (v) carbocyclyl,
- (vi) carbocyclic aryl, and
- carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
- halogen,
- 10 •hydroxy,
- cyano,
  - nitro,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the
- 15 group consisting of:
- halogen,
  - oxo,
  - carbocyclic aryloxy,
  - carbocyclic aryl, and
- 20 ••carbocyclic aryl substituted by C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the
- 25 group consisting of:
- halogen,
  - carbocyclic aryl, and
  - halogenated carbocyclic aryl,
  - C<sub>2-5</sub> alkenyloxy,
  - C<sub>3-6</sub> cycloalkoxy,

- carbocyclic aryloxy,
- carbocyclic aryloxy substituted by C<sub>1-3</sub> alkoxy,
- C<sub>1-5</sub> alkoxy carbonyl,
- mono-C<sub>1-5</sub> alkylaminocarbonyl,
- 5     •di-C<sub>1-5</sub> alkylaminocarbonyl,
- mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
- di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
- amino,
- mono-C<sub>1-5</sub> alkylamino,
- 10     •di-C<sub>1-5</sub> alkylamino,
- mono-C<sub>1-5</sub> alkylamino substituted by cyano,
- di-C<sub>1-5</sub> alkylamino substituted by cyano,
- C<sub>2-5</sub> alkynylcarbonylamino,
- C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,
- 15     •(carbocyclic aryl)NHC(O)NH,
- (carbocyclic aryl)NHC(O)NH substituted by C<sub>1-3</sub> alkoxy,
- (carbocyclic aryl)NHC(O)NH substituted by halogenated C<sub>1-3</sub> alkoxy,
- C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by halogen,
- 20     •carbocyclic arylthio,
- carbocyclic arylthio substituted by cyano,
- mono-C<sub>1-5</sub> alkylaminosulfonyl,
- di-C<sub>1-5</sub> alkylaminosulfonyl, and
- carbocyclic aryl,
- 25     (vii) heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
- halogen,

•nitro,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

5

••halogen,

••hydroxy,

••C<sub>1-5</sub> alkylthio,

••C<sub>1-5</sub> alkylthio substituted by carbocyclic aryl,

••C<sub>1-5</sub> alkylthio substituted by halogenated carbocyclic aryl,

10

••carbocyclic aryl,

••carbocyclic aryl substituted by halogen, and

••heterocycl,

•C<sub>1-5</sub> alkoxy,

•carbocyclic aryloxy,

15

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkylthio,

•C<sub>2-5</sub> alkenylthio,

•carbocyclic arylthio,

•carbocyclic arylthio substituted by C<sub>1-5</sub> alkoxy carbonyl,

20

•C<sub>1-5</sub> alkylsulfonyl,

•carbocyclic arylsulfonyl,

•carbocyclic arylsulfonyl substituted by C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkoxy carbonyl,

•carbocyclic aryl,

25

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••nitro,

••C<sub>1-5</sub> alkyl, and

••C<sub>1-5</sub> alkyl substituted by halogen,

•heterocyclyl;

R<sub>2</sub> is methylamino or dimethylamino when Y is a single bond or -CH<sub>2</sub>-;

5 wherein carbocyclic aryl is phenyl, naphthyl, or anthranyl;

carbocyclyl is 1,2,3,4-tetrahydronaphthyl, 1-oxo-indanyl, 9-fluorenyl,

9-oxo-9H-fluorenyl, bicyclo[2.2.1]heptyl, indenyl, or menthyl;

heterocyclyl is 1,2,3-triazolyl, 1H-indolyl, 1H-pyrrolyl,

2,3-dihydro-1-oxo-isindolyl, 2,3-dihydro-benzo[1,4]dioxinyl,

10 2,3-dihydro-benzofuryl, 2,4-dihydro-3-oxo-pyrazolyl, 2H-benzopyranyl,

2-oxo-benzopyranyl, 3,4-dihydro-2H-benzo[b][1,4]dioxepinyl, 4-oxo-benzopyranyl,

9H-carbazolyl, 9H-xanthenyl, azetidiny, benzo[1,3]dioxolyl,

benzo[2,1,3]oxadiazolyl, benzo[1,2,5]oxadiazolyl, benzo[b]thienyl, benzofuryl,

benzothiazolyl, furyl, imidazo[2,1-b]thiazolyl, imidazolyl, isoxazolyl, morpholino,

15 pyrazolyl, pyridyl, pyrimidyl, quinolyl, quinoxalyl, thiazolyl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-7</sub> alkyl, and

20 C<sub>1-7</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

•carbocyclic aryloxy,

25 •carbocyclic aryloxy substituted by halogen,

•mono-C<sub>1-5</sub> alkylamino,

•mono-C<sub>1-5</sub> alkylamino substituted by substituent(s) independently selected from the group consisting of:

- cyano, and
- carbocyclic aryl,
- di-C<sub>1-5</sub> alkylamino,
- di-C<sub>1-5</sub> alkylamino substituted by substituent(s) independently selected from
- 5 the group consisting of:
  - cyano, and
  - carbocyclic aryl,
  - mono-carbocyclic arylamino,
  - di-carbocyclic arylamino,
  - 10 •carbocyclic arylsulfonylamino,
  - carbocyclic arylsulfonylamino substituted by C<sub>1-5</sub> alkyl,
  - carbocyclic aryl,
  - carbocyclic aryl substituted by substituent(s) independently selected from
  - the group consisting of:
    - 15 ••halogen,
    - nitro,
    - C<sub>1-5</sub> alkyl,
    - C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from
    - the group consisting of:
      - 20 ••oxo, and
      - carbocyclic aryl,
      - C<sub>1-5</sub> alkoxy,
      - C<sub>1-5</sub> alkoxy substituted by halogen,
      - heterocyclyl,
      - 25 •heterocyclyl substituted by carbocyclic aryl, and
      - heterocyclyl substituted by halogen,
- (ii) C<sub>2-7</sub> alkenyl, and
- C<sub>2-7</sub> alkenyl substituted by substituent(s) independently selected from the

group consisting of:

•carbocyclic aryl, and

•carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,

(iii) C<sub>2-5</sub> alkynyl, and

5 C<sub>2-5</sub> alkynyl substituted by carbocyclic aryl,

(iv) C<sub>3-6</sub> cycloalkyl, and

C<sub>3-6</sub> cycloalkyl substituted by substituent(s) independently selected from the group consisting of:

•C<sub>1-5</sub> alkyl, and

10 •C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,

(v) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

15 •hydroxy,

•cyano,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy,

20 •C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

••halogen, and

••carbocyclic aryl,

••carbocyclic aryl substituted by halogen,

25 •C<sub>2-5</sub> alkenyloxy,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino,

•mono-C<sub>1-5</sub> alkylamino substituted by cyano,



- di-C<sub>1-5</sub> alkylamino substituted by cyano,
  - C<sub>1-5</sub> alkylthio, and
  - C<sub>1-5</sub> alkylthio substituted by halogen,
- (vi) heterocyclyl, and
- 5 heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
- halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the
- 10 group consisting of:
- hydroxy, and
  - carbocyclic aryl,
  - C<sub>1-5</sub> alkoxy,
  - carbocyclic arylthio,
- 15 •carbocyclic arylthio substituted by C<sub>1-5</sub> alkoxycarbonyl,
- C<sub>1-5</sub> alkoxycarbonyl,
  - carbocyclic aryl,
  - carbocyclic aryl substituted by substituent(s) independently selected from
- the group consisting of:
- 20 •halogen,
- C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkyl substituted by halogen,
- L is Formula (VII);
- Y is a single bond or -CH<sub>2</sub>-;
- 25 R<sub>2</sub> is methylamino or dimethylamino;
- wherein carbocyclic aryl is phenyl or naphthyl;
- heterocyclyl is 1*H*-indolyl, 1*H*-pyrrolyl, 2,3-dihydro-benzo[1,4]dioxinyl,
- 4-oxo-benzopyranyl, 9*H*-carbazolyl, azetidiny, benzo[1,3]dioxolyl, benzo[*b*]thienyl,

furyl, imidazo[2,1-b]thiazolyl, pyrazolyl, pyridyl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, p is 0; R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single

5 bond or -CH<sub>2</sub>-; and B is a single bond or -CH<sub>2</sub>-; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-5</sub> alkyl, and

C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group  
10 consisting of:

•mono-C<sub>1-3</sub> alkylamino,

•mono-C<sub>1-3</sub> alkylamino substituted by cyano,

•di-C<sub>1-3</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino substituted by cyano,

15 •mono-carbocyclic arylamino,

•di-carbocyclic arylamino,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:

20 ••halogen, and

••C<sub>1-5</sub> alkoxy,

•heterocyclyl, and

•heterocyclyl substituted by carbocyclic aryl,

(ii) C<sub>2-5</sub> alkenyl, and

25 C<sub>2-5</sub> alkenyl substituted by carbocyclic aryl,

(iii) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:

- halogen,
  - hydroxy,
  - C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxy substituted by halogen, and
  - C<sub>2-5</sub> alkenyloxy,
- (iv) heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
- halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,
  - C<sub>1-5</sub> alkoxy, and
  - C<sub>1-5</sub> alkoxy carbonyl;
- wherein carbocyclic aryl is phenyl or naphthyl;
- heterocyclyl is 1*H*-indolyl, azetidiny, or benzo[1,3]dioxolyl; and
- halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

- ethyl 4,6-dichloro-3-[[[cis-4-[[4-(dimethylamino)quinolin-2-yl]amino]-cyclohexyl]amino]-methyl]-1*H*-indole-2-carboxylate;
- 3-[[{2-[(cis-4-[[4-(dimethylamino)quinolin-2-yl]amino] cyclohexyl)-amino]ethyl}(phenyl)-amino]propanenitrile;
- N<sup>d</sup>,N<sup>d</sup>-dimethyl-N<sup>2</sup>-(cis-4-[[2-(2-phenyl-1*H*-indol-3-yl)ethyl]amino]-cyclohexyl)quinoline-2,4-diamine;
- N<sup>2</sup>-[cis-4-[[1-(diphenylmethyl)azetidin-3-yl]methyl] amino]cyclohexyl]-N<sup>d</sup>,N<sup>d</sup>-dimethylquinoline-2,4-diamine;
- N<sup>2</sup>-(cis-4-[[{(2,6-dimethoxybenzyl)amino]methyl} cyclohexyl]-N<sup>d</sup>,N<sup>d</sup>-dimethylquinoline-2,4-

- diamine;
- $N^2$ -(cis-4-({[(2-ethoxybenzyl)amino]methyl} cyclohexyl)- $N^4$ , $N^4$ -dimethylquinoline-2,4-diamine;
- $N^2$ -(cis-4-({[(4-methoxy-1-naphthyl)methyl]amino} methyl)cyclohexyl)- $N^4$ , $N^4$ -
- 5 dimethylquinoline-2,4-diamine;
- 4-bromo-2-({[(cis-4-({[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-methyl]amino}-methyl)-6-methoxyphenol;
- $N^2$ -(cis-4-({[(5-bromo-1H-indol-3-yl)methyl]amino} methyl)cyclohexyl)- $N^4$ , $N^4$ -dimethylquinoline-2,4-diamine;
- 10  $N^2$ -(cis-4-({[(5-bromo-2,4-dimethoxybenzyl)amino]methyl} cyclohexyl)- $N^4$ , $N^4$ -dimethylquinoline-2,4-diamine;
- $N^2$ -(cis-4-({[(3,3-diphenylprop-2-en-1-yl)amino]methyl} cyclohexyl)- $N^4$ , $N^4$ -dimethylquinoline-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-({[(2,4,6-trimethoxybenzyl)amino]methyl}-cyclohexyl)quinoline-2
- 15 ,4-diamine;
- $N^2$ -(cis-4-({[(2,5-diethoxybenzyl)amino]methyl} cyclohexyl)- $N^4$ , $N^4$ -dimethylquinoline-2,4-diamine;
- $N^2$ -(cis-4-({[(2,4-diethoxybenzyl)amino]methyl} cyclohexyl)- $N^4$ , $N^4$ -dimethylquinoline-2,4-diamine;
- 20  $N^2$ -(cis-4-({[(3,5-dibromo-2-methoxybenzyl)amino]methyl} cyclohexyl)- $N^4$ , $N^4$ -dimethylquinoline-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-({[(2,4,5-triethoxybenzyl)amino]methyl}-cyclohexyl)quinoline-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-({[(2,4,5-trimethoxybenzyl)amino]methyl}-cyclohexyl)quinoline-2
- 25 ,4-diamine;
- $N^2$ -(cis-4-({[(2-allyloxybenzyl)amino]methyl} cyclohexyl)- $N^4$ , $N^4$ -dimethylquinoline-2,4-diamine;
- $N^2$ -(cis-4-({[(7-methoxy-1,3-benzodioxol-5-yl)methyl]amino} methyl)-cyclohexyl)- $N^4$ , $N^4$ -

dimethylquinoline-2,4-diamine;

$N^2$ -{cis-4-[2-(4-bromo-2-trifluoromethoxy-phenyl)-ethylamino]-cyclohexyl}- $N^4, N^4$ -

dimethyl-quinoline-2,4-diamine;

$N^2$ -[cis-4-(4-bromo-2-trifluoromethoxy-benzyl)amino-cyclohexyl]- $N^4, N^4$ -dimethyl-quinoline

5 -2,4-diamine;

$N^2$ -[cis-4-(4-bromo-2-trifluoromethoxy-benzyl)amino-cyclohexyl]- $N^4$ -methyl-quinoline-2,4-

diamine;

$N^2$ -{4-[2-(4-bromo-2-trifluoromethoxy-phenyl)-ethylamino]-cyclohexyl}- $N^4$ -methyl-

quinoline-2,4-diamine;

10  $N^4$ -methyl- $N^2$ -{cis-4-[(2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl}-quinoline-2,4-diamine;

$N^2$ -{cis-4-[(4-bromo-2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl}- $N^4$ -methyl-

quinoline-2,4-diamine;

$N^2$ -[cis-4-(4-bromo-2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl)- $N^4, N^4$ -

15 dimethyl-quinoline-2,4-diamine;

$N^4, N^4$ -dimethyl- $N^2$ -{cis-4-[(2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl}-

quinoline-2,4-diamine;

cis- $N$ -(3,5-dimethoxybenzyl)- $N'$ -(4-methylquinolin-2-yl)cyclohexane-1,4-diamine; and

cis- $N$ -(3,5-dichlorobenzyl)- $N'$ -(4-methylquinolin-2-yl)cyclohexane-1,4-diamine;

20 or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention  $R_1$  is selected from the group consisting of:

(i)  $C_{1-3}$  alkyl, and

$C_{1-3}$  alkyl substituted by substituent(s) independently selected from the group consisting of:

25

•hydroxy,

•oxo,

• $C_{1-5}$  alkoxy,

• $C_{1-3}$  alkoxy substituted by carbocyclic aryl,

- C<sub>1-3</sub> alkylcarbonyloxy,  
•carbocyclic aryloxy,  
•carbocyclic aryloxy substituted by substituent(s) independently selected  
from the group consisting of:
- 5                   ••halogen,  
                  ••nitro,  
                  ••C<sub>1-3</sub> alkyl,  
                  ••C<sub>1-3</sub> alkoxy, and  
                  ••C<sub>1-3</sub> alkoxy substituted by halogen,
- 10                  •heterocyclyloxy,  
                  •heterocyclyloxy substituted by C<sub>1-3</sub> alkyl,  
                  •mono-C<sub>1-3</sub> alkylaminocarbonyl,  
                  •di-C<sub>1-3</sub> alkylaminocarbonyl,  
                  •mono-C<sub>1-3</sub> alkylamino,
- 15                  •di-C<sub>1-3</sub> alkylamino,  
                  •mono-carbocyclic arylamino,  
                  •di-carbocyclic arylamino,  
                  •mono-carbocyclic arylamino substituted by halogen,  
                  •di-carbocyclic arylamino substituted by halogen,
- 20                  •carbocyclic arylcarbonylamino,  
                  •C<sub>1-3</sub> alkoxycarbonylamino,  
                  •C<sub>1-3</sub> alkylthio,  
                  •C<sub>1-3</sub> alkylthio substituted by substituent(s) independently selected from the  
group consisting of:
- 25                   ••carbocyclic aryl, and  
                  ••carbocyclic aryl substituted by substituent(s) independently  
selected from the group consisting of:  
                  ••halogen, and

- \*\*\*C<sub>1-5</sub> alkoxy,
- \*carbocyclic arylthio,
- \*heterocyclylthio,
- \*heterocyclylthio substituted by C<sub>1-5</sub> alkyl,
- 5 \*C<sub>3-6</sub> cycloalkyl,
- \*C<sub>3-6</sub> cycloalkenyl,
- \*carbocyclyl,
- \*carbocyclyl substituted by substituent(s) independently selected from the group consisting of:
- 10 \*\*halogen,
- \*\*C<sub>1-5</sub> alkyl,
- \*\*C<sub>1-5</sub> alkoxy,
- \*\*C<sub>2-5</sub> alkenyl, and
- \*\*C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected
- 15 from the group consisting of:
- \*\*\*carbocyclic aryl, and
- \*\*\*carbocyclic aryl substituted by C<sub>1-5</sub> alkylsulfinyl,
- \*carbocyclic aryl,
- \*carbocyclic aryl substituted by substituent(s) independently selected from
- 20 the group consisting of:
- \*\*halogen,
- \*\*hydroxy,
- \*\*nitro,
- \*\*C<sub>1-5</sub> alkyl,
- 25 \*\*C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
- \*\*\*oxo,
- \*\*\*carbocyclic aryl, and

- \*\*\*heterocyclyl,
- \*\*C<sub>1-5</sub> alkoxy,
- °C<sub>1-5</sub> alkoxy substituted by halogen,
- °C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,
- 5     \*\*carbocyclic aryloxy,
- \*\*mono-carbocyclic arylaminocarbonyl,
- \*\*mono-carbocyclic arylaminocarbonyl substituted by halogen,
- \*\*di-carbocyclic arylaminocarbonyl,
- \*\*di-carbocyclic arylaminocarbonyl substituted by halogen,
- 10     \*\*carbocyclic aryl, and
- \*\*heterocyclyl,
- heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
- 15     \*\*C<sub>1-5</sub> alkyl,
- \*\*C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,
- \*\*C<sub>1-5</sub> alkoxy,
- \*\*C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,
- \*\*carbocyclic aryl, and
- 20     \*\*carbocyclic aryl substituted by halogen,
- (ii)   C<sub>2-3</sub> alkenyl, and
- C<sub>2-3</sub> alkenyl substituted by substituent(s) independently selected from the  
group consisting of:
- carbocyclic aryl,
- 25     •carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:
- \*\*halogen, and
- \*\*nitro,



- (iii) C<sub>3-6</sub> cycloalkyl, and  
C<sub>3-6</sub> cycloalkyl substituted by substituent(s) independently selected from the  
group consisting of:  
•C<sub>1-5</sub> alkyl,  
5 •C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the  
group consisting of:  
••oxo, and  
••carbocyclic aryl, and  
•carbocyclic aryl,  
10 (iv) carbocyclyl,  
(v) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:  
•halogen,  
15 •hydroxy,  
•cyano,  
•nitro,  
•carboxy,  
•carbamoyl,  
20 •C<sub>1-5</sub> alkyl,  
•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the  
group consisting of:  
••halogen,  
••hydroxy,  
25 ••oxo,  
••carbocyclic aryloxy,  
••carbocyclic aryl, and  
••carbocyclic aryl substituted by C<sub>1-5</sub> alkyl,

- C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:
  - halogen, and
  - 5       •carbocyclic aryl,
  - carbocyclic aryloxy,
  - carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxycarbonyl,
  - mono-C<sub>1-5</sub> alkylaminocarbonyl,
  - 10       •di-C<sub>1-5</sub> alkylaminocarbonyl,
  - mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
  - di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
  - amino,
  - mono-C<sub>1-5</sub> alkylamino,
  - 15       •di-C<sub>1-5</sub> alkylamino,
  - C<sub>2-5</sub> alkynylcarbonylamino,
  - C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,
  - (carbocyclic aryl)NHC(O)NH,
  - (carbocyclic aryl)NHC(O)NH substituted by C<sub>1-5</sub> alkoxy,
  - 20       •(carbocyclic aryl)NHC(O)NH substituted by halogenated C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkylthio,
  - C<sub>1-5</sub> alkylthio substituted by halogen,
  - carbocyclic arylthio,
  - carbocyclic arylthio substituted by cyano,
  - 25       •mono-C<sub>1-5</sub> alkylaminosulfonyl,
  - di-C<sub>1-5</sub> alkylaminosulfonyl, and
  - carbocyclic aryl,
  - (vi) heterocyclyl, and

heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•nitro,

5 •hydroxy,

•amino,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

10 ••halogen,

••C<sub>1-5</sub> alkylthio,

••C<sub>1-5</sub> alkylthio substituted by carbocyclic aryl,

••C<sub>1-5</sub> alkylthio substituted by halogenated carbocyclic aryl,

••carbocyclic aryl,

15 ••carbocyclic aryl substituted by halogen, and

••heterocyclyl,

•C<sub>1-5</sub> alkoxy,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by halogen,

20 •carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino,

•C<sub>1-5</sub> alkylthio,

25 •C<sub>2-5</sub> alkenylthio,

•carbocyclic arylthio,

•C<sub>1-5</sub> alkylsulfonyl,

•carbocyclic arylsulfonyl,

\*carbocyclic arylsulfonyl substituted by C<sub>1-5</sub> alkyl,

\*carbocyclic aryl,

\*carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

- 5                               \*\*halogen,  
                                   \*\*nitro, and  
                                   \*\*C<sub>1-5</sub> alkyl,  
                                   \*heterocyclyl;

L is Formula (VII);

- 10                           Y is -C(O)-;

wherein carbocyclic aryl is phenyl, naphthyl, or anthranyl;

carbocyclyl is 1,2,3,4-tetrahydronaphthyl, 1-oxo-indanyl,

9-oxo-9H-fluorenyl, or indenyl;

heterocyclyl is 1,2,3-triazolyl, 1H-indolyl, 1H-pyrrolyl,

- 15                           2,3-dihydro-1-oxo-isoindolyl, 2,3-dihydro-benzofuryl, 2,4-dihydro-3-oxo-pyrazolyl,  
                                   2H-benzopyranyl, 2-oxo-benzopyranyl, 9H-xanthenyl, benzo[1,3]dioxolyl,  
                                   benzo[2,1,3]oxadiazolyl, benzo[1,2,5]oxadiazolyl, benzo[b]thienyl, benzofuryl,  
                                   benzothiazolyl, furyl, imidazolyl, isoxazolyl, morpholino, pyrazolyl, pyridyl,  
                                   pyrimidyl, quinolyl, quinoxalyl, thiazolyl, or thienyl; and

- 20                           halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>2</sub> is hydrogen, halogen, methyl, trifluoromethyl, methoxy, carbamoyl, amino, methylamino, or dimethylamino; p is 0; R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single bond; B is a single bond or -CH<sub>2</sub>-; or a pharmaceutically acceptable salt,

- 25   hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

- (i)   C<sub>1-5</sub> alkyl, and

C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group

consisting of:

•oxo,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by halogen,

5 •carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino,

•mono-carbocyclic arylamino,

10 •di-carbocyclic arylamino,

•mono-carbocyclic arylamino substituted by halogen,

•di-carbocyclic arylamino substituted by halogen,

•C<sub>3-6</sub> cycloalkyl,

•carbocyclic aryl,

15 •carbocyclic aryl by substituent(s) independently selected from the group

consisting of:

••halogen,

••C<sub>1-5</sub> alkyl, and

••C<sub>1-5</sub> alkoxy,

20 •heterocyclyl, and

•heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkoxy, and

25 ••carbocyclic aryl,

(ii) C<sub>2-5</sub> alkenyl, and

C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen, and

•nitro,

(iii) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•hydroxy,

•cyano,

•nitro,

•carbamoyl,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkyl substituted by hydroxy,

•C<sub>1-5</sub> alkoxycarbonyl,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

•halogen, and

•carbocyclic aryl,

•carbocyclic aryloxy, and

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,

(iv) heterocyclyl, and

heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

- nitro,
- amino,
- C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkyl substituted by halogen,
- 5   •C<sub>1-5</sub> alkoxy,
- carbocyclic aryloxy,
- carbocyclic aryloxy substituted by halogen,
- carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,
- carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
- 10   •mono-C<sub>1-5</sub> alkylamino,
- di-C<sub>1-5</sub> alkylamino,
- carbocyclic aryl,
- carbocyclic aryl substituted by halogen,
- carbocyclic aryl substituted by nitro, and
- 15   •heterocyclyl,
- wherein carbocyclic aryl is phenyl;
- heterocyclyl is 1,2,3-triazolyl, 1*H*-indolyl, 1*H*-pyrrolyl, 9*H*-xanthenyl,
- benzo[2,1,3]oxadiazolyl, benzo[1,2,5]oxadiazolyl, furyl, isoxazolyl, pyridyl,
- quinolyl, quinoxalyl, thiazolyl, or thienyl; and
- 20   halogen is fluoro, chloro, bromo, or iodo;
- or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

- (i) C<sub>1-5</sub> alkyl, and
- C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group
- 25   consisting of:
- carbocyclic aryloxy,
- carbocyclic aryloxy substituted by halogen,
- carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,

- carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
- mono-C<sub>1-5</sub> alkylamino,
- di-C<sub>1-5</sub> alkylamino,
- mono-carbocyclic arylamino,
- 5       •di-carbocyclic arylamino,
- mono-carbocyclic arylamino substituted by halogen,
- di-carbocyclic arylamino substituted by halogen,
- carbocyclic aryl,
- carbocyclic aryl by substituent(s) independently selected from the group  
10       consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkoxy,
- and
- 15       •heterocyclyl,
- (ii) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:
  - halogen,
  - 20       •nitro,
  - hydroxy,
  - cyano,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by halogen,
  - 25       •C<sub>1-5</sub> alkoxycarbonyl,
  - C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxy substituted by halogen,
  - carbocyclic aryloxy, and



•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,  
 (iii) heterocyclyl, and  
 heterocyclyl substituted by substituent(s) independently selected from the  
 group consisting of:

- 5       •halogen,  
          •nitro,  
          •C<sub>1-5</sub> alkyl,  
          •carbocyclic aryloxy,  
          •carbocyclic aryloxy substituted by halogen,  
 10       •carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,  
          •carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,  
          •carbocyclic aryl,  
          •carbocyclic aryl substituted by halogen,  
          •carbocyclic aryl substituted by nitro, and  
 15       •heterocyclyl;

wherein carbocyclic aryl is phenyl;

heterocyclyl is 1*H*-indolyl, 1*H*-pyrrolyl, 9*H*-xanthenyl,

benzo[2,1,3]oxadiazolyl, benzo[1,2,5]oxadiazolyl, furyl, isoxazolyl, pyridyl,  
 thiazolyl, or thienyl; and

20       halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the  
 compound is selected from the group consisting of:

- 25       N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-3-methoxybenzamide;  
       3-bromo-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-benzamide;  
       4-bromo-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-benzamide;  
       N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2,1,3-benzoxadiazole-5-  
 carboxamide;

- 3-chloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-benzamide;  
4-chloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-benzamide;  
4-chloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-3-nitrobenzamide;  
3-cyano-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-benzamide;  
5 3,5-dichloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)benzamide;  
3,4-dichloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)benzamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-2,2-diphenylacetamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-3,4-difluorobenzamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-3,5-difluorobenzamide;  
10 N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-4-fluorobenzamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-3-fluoro-5-(trifluoromethyl)benzamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-4-methyl-3-nitrobenzamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-3-nitrobenzamide;  
15 N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-2-phenoxybutanamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-2-phenoxypropanamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-3-methylbenzamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-3-(trifluoromethoxy)-benzamide;  
20 4-bromo-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-3-methylbenzamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-3-iodobenzamide;  
3-chloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-2,4-difluorobenzamide;  
25 N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-2,5-dimethyl-3-furamide;  
3-chloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-4-fluorobenzamide;  
N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-3-fluoro-4-methylbenzamide;

- N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-3,5-dimethoxybenzamide;  
N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-3,5-bis(trifluoromethyl)-benzamide;  
(2E)-N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-3-(4-nitrophenyl)-  
5 acrylamide;  
N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-4-fluoro-3-methylbenzamide;  
2,5-dichloro-N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}-cyclohexyl)thiophene-3-carboxamide;  
10 2-(4-chlorophenoxy)-N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}-cyclohexyl)-acetamide;  
3-(2-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}-cyclohexyl)-5-methylisoxazole-4-carboxamide;  
1-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}-cyclohexyl)-  
15 cyclopentanecarboxamide;  
3-(2-chloro-6-fluorophenyl)-N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-5-methylisoxazole-4-carboxamide;  
N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-3-fluorobenzamide;  
N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-4-fluoro-3-(trifluoromethyl)benzamide;  
20 (trifluoromethyl)benzamide;  
N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-5-methyl-2-phenyl-2H-1,2,3-triazole-4-carboxamide;  
N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-2-(4-methoxyphenoxy)-5-nitrobenzamide;  
25 N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-5-nitro-2-furamide;  
N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-2-phenoxyacetamide;  
N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)quinoxaline-2-carboxamide;  
2-(3-chlorophenoxy)-N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}-cyclohexyl)-

- acetamide;
- 3-(2,6-dichlorophenyl)-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-5-methylisoxazole-4-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-2-phenoxy)nicotinamide;
- 5 N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-2-(4-methylphenoxy)-nicotinamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-2-(2-thienyl)-1,3-thiazole-4-carboxamide;
- 5-bromo-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-thiophene-2-
- 10 carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-2-(2,3,6-trichlorophenyl)-acetamide;
- 5-(4-chloro-2-nitrophenyl)-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-2-furamide;
- 15 5-chloro-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-thiophene-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-5-iodo-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-2-(2-iodophenyl)acetamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-2-(5-methoxy-2-methyl-1H-i-
- 20 ndol-3-yl)acetamide;
- (2E)-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-3-(3-nitrophenyl)-acrylamide;
- 2,2-bis(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-acetamide;
- 25 N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-5-nitrothiophene-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-3-methyl-4-nitrobenzamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl}-3-methoxy-4-

- nitrobenzamide;
- 5-bromo-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-furamide;
- 4,5-dibromo-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)thiophene-2-carboxamide;
- 5 4,5-dibromo-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-(1H-indol-3-yl)acetamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-(1H-indol-3-yl)-4-oxo-4-p-phenylbutanamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-(2-phenyl-1H-indol-3-yl)acetamide;
- 10 N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-(2,4,6-trichlorophenoxy)-acetamide;
- 3-(benzyloxy)-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-4-methoxybenzamide;
- 15 N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-phenoxybenzamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-phenylquinoline-4-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-5-(3-nitrophenyl)-2-furamide;
- 20 N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-5-nitrothiophene-3-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-1-methyl-4-nitro-1H-pyrrole-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-4-nitrobenzamide;
- 25 N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-methoxy-4-nitrobenzamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-3-fluoro-4-(trifluoromethyl)benzamide;

- N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-3,5-dimethyl-4-nitrobenzamide;
- N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-2-mesityl-2-oxoacetamide;
- 5-chloro-N-(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-2-hydroxybenzamide;
- N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)methyl]-3-methoxybenzamide;
- 3-bromo-N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-methyl]-benzamide;
- 10 4-bromo-N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-methyl]-benzamide;
- N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)methyl]-2,1,3-benzoxadiazole-5-carboxamide;
- 3-chloro-N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-methyl]-benzamide;
- 15 4-chloro-N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-methyl]-benzamide;
- 4-chloro-N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-methyl]-3-nitrobenzamide;
- 20 3-cyano-N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)-methyl]benzamide;
- 3,5-dichloro-N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)methyl]-benzamide;
- 3,4-dichloro-N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)methyl]-benzamide;
- 25 N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)methyl]-2,2-diphenylacetamide;
- N-[(cis-4-{{4-(dimethylamino)quinolin-2-yl}amino}cyclohexyl)methyl]-3,4-difluorobenzamide;

- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3,5-difluorobenzamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-4-fluorobenzamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3-fluoro-5-
- 5 (trifluoromethyl)benzamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-4-methyl-3-nitrobenzamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3-nitrobenzamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2-
- 10 phenoxybutanamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2-phenoxypropanamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3-methylbenzamide;
- 15 N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3-(trifluoromethoxy)benzamide;
- 4-bromo-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]-3-methylbenzamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3-iodobenzamide;
- 20 3-chloro-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]-2,4-difluorobenzamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2,5-dimethyl-3-furamide;
- 3-chloro-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]-4-
- 25 fluorobenzamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3-fluoro-4-methylbenzamide;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3,5-

dimethoxybenzamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3,5-bis(trifluoromethyl)benzamide;

(2E)-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]-3-(4-nitrophenyl)acrylamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-4-fluoro-3-methylbenzamide;

2,5-dichloro-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)methyl]-thiophene-3-carboxamide;

20 2,6-dichloro-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)methyl]-benzamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2,4,6-trimethylbenzamide;

22 2,4,6-trichloro-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)methyl]-benzamide;

(2E)-3-(2-chlorophenyl)-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]acrylamide;

5-bromo-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]thiophene-2-carboxamide;

20 N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2-(2,3,6-trichlorophenyl)acetamide;

5-(4-chloro-2-nitrophenyl)-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)methyl]-2-furamide;

5-chloro-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]thiophene-2-carboxamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-5-iodo-2-furamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2-(2-iodophenyl)-acetamide;



- (2E)-N-[(cis-4-[[4-(dimethylamino)quinolin-2-yl]amino]cyclohexyl)-methyl]-3-(3-nitrophenyl)acrylamide;
- 2,2-bis(4-chlorophenyl)-N-[(cis-4-[[4-(dimethylamino)quinolin-2-yl]amino]cyclohexyl)-methyl]acetamide;
- 5 N-[(cis-4-[[4-(dimethylamino)quinolin-2-yl]amino]cyclohexyl)methyl]-5-nitrothiophene-2-carboxamide;
- N-[(cis-4-[[4-(dimethylamino)quinolin-2-yl]amino]cyclohexyl)methyl]-3-methyl-4-nitrobenzamide;
- N-[(cis-4-[[4-(dimethylamino)quinolin-2-yl]amino]cyclohexyl)methyl]-3-methoxy-4-nitrobenzamide;
- 10 nitrobenzamide;
- N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-2-phenoxy-nicotinamide;
- 3,4-difluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 3,4-difluoro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 2-phenoxy-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;
- 15 3-chloro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;
- N-[cis-4-(4-chloro-quinolin-2-ylamino)-cyclohexyl]-2-phenoxy-nicotinamide;
- 3-methyl-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 3-methoxy-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 3-chloro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 20 5-nitro-thiophene-3-carboxylic acid [cis-4-(quinolin-2-ylamino)-cyclohexyl]-amide;
- 5-nitro-thiophene-3-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-amide;
- 3-chloro-4-fluoro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 3,5-dimethoxy-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 25 3,4-dichloro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;
- benzo[2,3,1]oxadiazole-5-carboxylic acid [cis-4-(quinolin-2-ylamino)-cyclohexyl]-amide;
- 3-methyl-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 3-methoxy-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;

- 4-cyano-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
1-methyl-4-nitro-1H-pyrrole-2-carboxylic acid [cis-4-(quinolin-2-ylamino)-cyclohexyl]-amide;  
9H-xanthene-9-carboxylic acid [cis-4-(quinolin-2-ylamino)-cyclohexyl]-amide;  
5 5-(4-chloro-phenyl)-furan-2-carboxylic acid [cis-4-(quinolin-2-ylamino)-cyclohexyl]-amide;  
3-nitro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
4-fluoro-3-methyl-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
3-bromo-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
2-(2-bromo-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
10 3-cyano-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-trifluoromethyl-benzamide;  
N-[cis-4-(4-chloro-quinolin-2-ylamino)-cyclohexyl]-3,4-difluoro-benzamide;  
3,4-dichloro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
3-chloro-4-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
15 4-fluoro-3-methyl-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
1-methyl-4-nitro-1H-pyrrole-2-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-amide;  
9H-xanthene-9-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-amide;  
5-bromo-furan-2-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-amide;  
20 N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-2-*m*-tolyl-oxy-acetamide;  
N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-2-*m*-tolyl-oxy-acetamide;  
2,2-diphenyl-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;  
5-bromo-furan-2-carboxylic acid [cis-4-(quinolin-2-ylamino)-cyclohexyl]-amide;  
benzo[2,3,1]oxadiazole-5-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-amide;  
25 cyclohexyl]-amide;  
3-bromo-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
3-cyano-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-3-trifluoromethyl-benzamide;

- N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-2,2-diphenyl-acetamide;  
2-(4-fluoro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-fluoro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(3,4-difluoro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
5 2-(3,4-difluoro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-  
nicotinamide;  
N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-2-*p*-tolylloxy-nicotinamide;  
N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-2-*p*-tolylloxy-nicotinamide;  
2-(4-chloro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
10 2-(4-chloro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-bromo-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-bromo-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-methoxy-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-methoxy-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
15 2-(3-chloro-4-fluoro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(3-chloro-4-fluoro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-  
nicotinamide;  
N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-2-*m*-tolylloxy-nicotinamide;  
N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-2-*m*-tolylloxy-nicotinamide;  
20 2-(3-methoxy-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;  
2-(3-chloro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;  
2-(3-chloro-4-fluoro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-  
acetamide;  
2-(3,4-dichloro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;  
25 C-(methyl-phenyl-amino)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;  
2-(3,4-dichloro-phenylamino)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-  
acetamide;  
2-(3-methoxy-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;

- 2-(3-chloro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;  
 2-(3-chloro-4-fluoro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;  
 2-(3,4-dichloro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;  
 C-(methyl-phenyl-amino)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;  
 5 2-(3,4-dichloro-phenylamino)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;  
 3-hydroxy-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-isophthalamide acid methyl ester;  
 N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-3-trifluoromethoxy-benzamide;  
 N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-bis-trifluoromethyl-benzamide;  
 10 N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-3-trifluoromethoxy-benzamide;  
 N-[cis-4-(4-amino-quinolin-2-ylamino)-cyclohexyl]-3,4-difluoro-benzamide;  
 C-(ethyl-phenyl-amino)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;  
 C-(ethyl-phenyl-amino)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;  
 3-hydroxy-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 15 2-amino-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
 2,3-difluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 2,4-difluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 2,5-difluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 2,6-difluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 20 3,5-difluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 C-[(4-chloro-phenyl)-ethyl-amino]-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-  
 acetamide;  
 4-chloro-3-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 4-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 25 3-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 2-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 4-chloro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-isophthalamide acid methyl ester;

- 3,5-difluoro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 4-chloro-3-fluoro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 C-[(4-chloro-phenyl)-ethyl-amino]-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;  
 6-chloro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
 5 6-dimethylamino-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
 3-hydroxymethyl-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-isophthalamide;  
 3-chloro-5-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 3,4,5-trifluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 10 pyridine-2-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-amide;  
 4-chloro-pyridine-2-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-  
 cyclohexyl]-amide;  
 5-bromo-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
 N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-6-trifluoromethyl-nicotinamide;  
 15 3,4-difluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexylmethyl]-benzamide;  
 N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexylmethyl]-2-phenoxy-nicotinamide;  
 N-[cis-4-(4-dimethylamino-quinolin-2-ylamino)-cyclohexylmethyl]-3,4-difluoro-benzamide;  
 3,4-difluoro-N-[cis-4-(quinolin-2-ylamino)-cyclohexylmethyl]-benzamide;  
 2-phenoxy-N-[cis-4-(quinolin-2-ylamino)-cyclohexylmethyl]-nicotinamide;  
 20 4-methyl-N-{cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl} benzamide;  
 2-(4-chlorophenoxy)-N-{cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl} acetamide;  
 3,4,5-trimethoxy-N-{cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl} benzamide;  
 2-(3,4-difluorophenyl)-N-{cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl} acetamide;  
 2-(2-bromo-4,5-dimethoxyphenyl)-N-{cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl}-  
 25 acetamide;  
 2,6-dimethoxy-N-{cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl} nicotinamide;  
 N-{cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl}-4-(trifluoromethoxy)benzamide;  
 5-chloro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide; and

5-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

- 5        3-bromo-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-benzamide;  
        N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2,1,3-benzoxadiazole-5-carboxamide;
- 3-chloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-benzamide;
- 4-chloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-benzamide;
- 10       4-chloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-3-nitrobenzamide;
- 3,4-dichloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)benzamide;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-3,4-difluorobenzamide;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-4-fluorobenzamide;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-3-nitrobenzamide;
- 15       N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-phenoxybutanamide;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-phenoxypropanamide;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-3-methylbenzamide;
- 4-bromo-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-3-methylbenzamide;
- 20       N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2,5-dimethyl-3-furamide;
- 3-chloro-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-4-fluorobenzamide;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-3,5-dimethoxybenzamide;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-4-fluoro-3-methylbenzamide;
- 25       2-(4-chlorophenoxy)-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)-acetamide;
- 3-(2-chlorophenyl)-N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)-5-methylisoxazole-4-carboxamide;

- 3-(2-chloro-6-fluorophenyl)-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-5-methylisoxazole-4-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-4-fluoro-3-(trifluoromethyl)benzamide;
- 5 N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-(4-methoxyphenoxy)-5-nitrobenzamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-5-nitro-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-phenoxyacetamide;
- 2-(3-chlorophenoxy)-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-acetamide;
- 10 3-(2,6-dichlorophenyl)-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-5-methylisoxazole-4-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-phenoxy nicotinamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-(4-methylphenoxy)-nicotinamide;
- 15 N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-(2-thienyl)-1,3-thiazole-4-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-(2,3,6-trichlorophenyl)-acetamide;
- 20 N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-5-iodo-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-5-nitrothiophene-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-3-methyl-4-nitrobenzamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-3-methoxy-4-nitrobenzamide;
- 25 5-bromo-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-furamide;
- 4,5-dibromo-N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-2-(1H-indol-3-yl)acetamide;

- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl}-5-(3-nitrophenyl))-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl}-5-nitrothiophene-3-carboxamide;
- 5 N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl}-1-methyl-4-nitro-1H-pyrrole-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl}-4-nitrobenzamide;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl}-3-fluoro-4-(trifluoromethyl)benzamide;
- 10 3-bromo-N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]-benzamide;
- N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2,1,3-benzoxadiazole-5-carboxamide;
- 3-chloro-N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]-
- 15 benzamide;
- 4-chloro-N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]-benzamide;
- 4-chloro-N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]-3-nitrobenzamide;
- 20 3,4-dichloro-N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-benzamide;
- N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3,4-difluorobenzamide;
- N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-4-fluorobenzamide;
- 25 N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3-nitrobenzamide;
- N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2-phenoxybutanamide;
- N-[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2-



phenoxypropanamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3-

methylbenzamide;

4-bromo-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]-3-

5 methylbenzamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2,5-dimethyl-3-

furamide;

3-chloro-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-methyl]-4-

fluorobenzamide;

10 N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3,5-

dimethoxybenzamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-4-fluoro-3-

methylbenzamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2,4,6-

15 trimethylbenzamide;

2,4,6-trichloro-N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)methyl]-

benzamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-2-(2,3,6-

trichlorophenyl)acetamide;

20 N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-5-iodo-2-furamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-5-nitrothiophene-2-

carboxamide;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3-methyl-4-

nitrobenzamide;

25 N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-3-methoxy-4-

nitrobenzamide;

N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-2-phenoxy-nicotinamide;

3,4-difluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;

- 3,4-difluoro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
2-phenoxy-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
3-chloro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
3-methyl-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
5 3-methoxy-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
3-chloro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
5-nitro-thiophene-3-carboxylic acid [cis-4-(quinolin-2-ylamino)-cyclohexyl]-amide;  
5-nitro-thiophene-3-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-  
cyclohexyl]-amide;  
10 3-chloro-4-fluoro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
3,5-dimethoxy-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
3,4-dichloro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
benzo[2,3,1]oxadiazole-5-carboxylic acid [cis-4-(quinolin-2-ylamino)-cyclohexyl]-amide;  
3-methyl-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
15 3-methoxy-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
4-cyano-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
1-methyl-4-nitro-1H-pyrrole-2-carboxylic acid [cis-4-(quinolin-2-ylamino)-  
cyclohexyl]-amide;  
9H-xanthene-9-carboxylic acid [cis-4-(quinolin-2-ylamino)-cyclohexyl]-amide;  
20 3-nitro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
4-fluoro-3-methyl-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
3-bromo-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
2-(2-bromo-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
3-cyano-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
25 N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-trifluoromethyl-benzamide;  
N-[cis-4-(4-chloro-quinolin-2-ylamino)-cyclohexyl]-3,4-difluoro-benzamide;  
3,4-dichloro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
3-chloro-4-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;

- 4-fluoro-3-methyl-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
1-methyl-4-nitro-1H-pyrrole-2-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-  
cyclohexyl]-amide;  
9H-xanthene-9-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-amide;  
5 bromo-furan-2-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-amide;  
N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-2-*m*-tolylloxy-acetamide;  
N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-2-*m*-tolylloxy-acetamide;  
2,2-diphenyl-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;  
5-bromo-furan-2-carboxylic acid [cis-4-(quinolin-2-ylamino)-cyclohexyl]-amide;  
benzo[2,3,1]oxadiazole-5-carboxylic acid [cis-4-(4-methyl-quinolin-2-ylamino)-  
cyclohexyl]-amide;  
3-bromo-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
3-cyano-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-3-trifluoromethyl-benzamide;  
N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-2,2-diphenyl-acetamide;  
2-(4-fluoro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-fluoro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(3,4-difluoro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(3,4-difluoro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-  
nicotinamide;  
N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-2-*p*-tolylloxy-nicotinamide;  
N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-2-*p*-tolylloxy-nicotinamide;  
2-(4-chloro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-chloro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-bromo-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-bromo-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-methoxy-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
2-(4-methoxy-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;

- 2-(3-chloro-4-fluoro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;
- N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-2-*m*-tolylloxy-nicotinamide;
- N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-2-*m*-tolylloxy-nicotinamide;
- 5 2-(3-methoxy-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 2-(3-chloro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 2-(3-chloro-4-fluoro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 2-(3,4-dichloro-phenoxy)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 10 C-(methyl-phenyl-amino)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 2-(3-methoxy-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 2-(3-chloro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 2-(3-chloro-4-fluoro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 2-(3,4-dichloro-phenoxy)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 15 C-(methyl-phenyl-amino)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;
- N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-3-trifluoromethoxy-benzamide;
- N-[cis-4-(4-amino-quinolin-2-ylamino)-cyclohexyl]-3,4-difluoro-benzamide;
- C-(ethyl-phenyl-amino)-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;
- C-(ethyl-phenyl-amino)-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 20 3-hydroxy-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 2,4-difluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 3,5-difluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;
- C-[(4-chloro-phenyl)-ethyl-amino]-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-acetamide;
- 25 4-chloro-3-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 4-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 3-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;
- 4-chloro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;

- N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-isophthalamic acid methyl ester;  
 3,5-difluoro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 4-chloro-3-fluoro-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 C-[(4-chloro-phenyl)-ethyl-amino]-N-[cis-4-(quinolin-2-ylamino)-cyclohexyl]-acetamide;  
 5 6-chloro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
 3-chloro-5-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 3,4,5-trifluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-benzamide;  
 5-bromo-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
 4-methyl-N-[cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl] benzamide;  
 10 2-(4-chlorophenoxy)-N-[cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl]-acetamide;  
 3,4,5-trimethoxy-N-[cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl] benzamide;  
 2-(3,4-difluorophenyl)-N-[cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl]-acetamide;  
 2-(2-bromo-4,5-dimethoxyphenyl)-N-[cis-4-[(4-methylquinolin-2-yl)amino]-cyclohexyl]-  
 acetamide;  
 15 2,6-dimethoxy-N-[cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl] nicotinamide;  
 N-[cis-4-[(4-methylquinolin-2-yl)amino]cyclohexyl]-4-(trifluoromethoxy)-benzamide;  
 5-chloro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide; and  
 5-fluoro-N-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-nicotinamide;  
 or a pharmaceutically acceptable salt, hydrate, or solvate thereof.
- 20 In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:
- C<sub>1-16</sub> alkyl, and
- C<sub>1-16</sub> alkyl substituted by substituent(s) independently selected from the  
 group consisting of:
- carbocyclic aryl,
- 25 •carbocyclic aryl substituted by substituent(s) independently selected from  
 the group consisting of:
- halogen,
- C<sub>1-3</sub> alkyl,

- C<sub>1-5</sub> alkyl substituted by halogen,
- C<sub>1-5</sub> alkoxy, and
- C<sub>1-5</sub> alkoxy substituted by halogen,

L is Formula (XV);

5

Y is -C(O)NR<sub>5</sub>;

wherein carbocyclic aryl is phenyl; and

halogen is fluoro, chloro, or bromo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

10

C<sub>1-16</sub> alkyl, and

C<sub>1-16</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from

15

the group consisting of:

••halogen,

••C<sub>1-5</sub> alkyl, and

••C<sub>1-5</sub> alkyl substituted by halogen,

wherein carbocyclic aryl is phenyl; and

20

halogen is fluoro, chloro, or bromo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>2</sub> is methyl; p is 0; R<sub>3</sub> and R<sub>4</sub> are both hydrogen; A and B are both single bonds; and R<sub>5</sub> is hydrogen; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

25

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

cis-N-[(1R)-1-(4-bromophenyl)ethyl]-4-[(4-methylquinolin-2-yl)amino]-cyclohexanecarboxamide;

cis-N-[(1S)-1-[3,5-bis(trifluoromethyl)phenyl]ethyl]-4-[(4-methylquinolin-2-yl)amino]-cyclohexanecarboxamide;

cis-N-[(1R)-1-(2-fluorophenyl)ethyl]-4-[(4-methylquinolin-2-yl)amino]-cyclohexanecarboxamide;

5 cis-N-[(1S)-1-(2-fluorophenyl)ethyl]-4-[(4-methylquinolin-2-yl)amino]-cyclohexanecarboxamide;

cis-4-[(4-methylquinolin-2-yl)amino]-N-[(1S)-1-[2-(trifluoromethyl)phenyl]ethyl]-cyclohexanecarboxamide;

cis-4-[(4-methylquinolin-2-yl)amino]-N-[(1S)-1-[3-(trifluoromethyl)phenyl]ethyl]-cyclohexanecarboxamide;

10 cis-N-[(1R)-1-(4-chlorophenyl)ethyl]-4-[(4-methylquinolin-2-yl)amino]-cyclohexanecarboxamide; and

cis-N-[(1S)-1-(4-chlorophenyl)ethyl]-4-[(4-methylquinolin-2-yl)amino]-cyclohexanecarboxamide;

15 or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

cis-N-[(1R)-1-(4-bromophenyl)ethyl]-4-[(4-methylquinolin-2-yl)amino]-cyclohexanecarboxamide;

20 cis-N-[(1S)-1-(2-fluorophenyl)ethyl]-4-[(4-methylquinolin-2-yl)amino]-cyclohexanecarboxamide;

cis-4-[(4-methylquinolin-2-yl)amino]-N-[(1S)-1-[2-(trifluoromethyl)phenyl]ethyl]-cyclohexanecarboxamide; and

cis-4-[(4-methylquinolin-2-yl)amino]-N-[(1S)-1-[3-(trifluoromethyl)phenyl]ethyl]-cyclohexanecarboxamide;

25 or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-5</sub> alkyl, and

C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•C<sub>1-5</sub> alkoxy, carbonyl,

•C<sub>1-5</sub> alkylthio,

5 •carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••C<sub>1-5</sub> alkyl, and

10 ••C<sub>2-5</sub> alkenyl,

(ii) C<sub>3-6</sub> cycloalkyl, and

C<sub>3-6</sub> cycloalkyl substituted by carbocyclic aryl,

(iii) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

15 •halogen,

•cyano,

•nitro,

•C<sub>1-5</sub> alkyl,

20 •C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy, carbonyl,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

•C<sub>3-6</sub> cycloalkoxy,

25 •carbocyclic aryloxy,

•C<sub>1-5</sub> alkylthio, and

•carbocyclic aryl,

(iv) heterocyclyl, and



heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by halogen, and

5       •carbocyclic aryl;

L is Formula (VII);

Y is -C(O)NR<sub>5</sub>;

wherein carbocyclic aryl is phenyl or naphthyl;

heterocyclyl is 2,3-dihydro-benzo[1,4]dioxinyl,

10       3,4-dihydro-2H-benzo[b][1,4]-dioxepinyl, benzo[1,3]dioxolyl, furyl, or isoxazolyl;  
and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>2</sub> is hydrogen, methyl, methylamino, or  
15   dimethylamino; p is 0; R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single bond; B is a single bond or -CH<sub>2</sub>-; R<sub>5</sub> is  
hydrogen; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i)   C<sub>1-5</sub> alkyl, and

20       C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group  
consisting of:

•C<sub>1-5</sub> alkoxycarbonyl,

•carbocyclic aryl, and

•carbocyclic aryl substituted by halogen,

(ii)   carbocyclic aryl, and

25       carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:

•halogen,

•nitro,

- C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by halogen, and
  - C<sub>1-5</sub> alkoxy,
- (iii) heterocyclyl,
- heterocyclyl substituted by C<sub>1-5</sub> alkyl, and
- heterocyclyl substituted by carbocyclic aryl;
- wherein carbocyclic aryl is phenyl or naphthyl;
- heterocyclyl is isoxazolyl; and
- halogen is fluoro, chloro, bromo, or iodo;
- or a pharmaceutically acceptable salt, hydrate, or solvate thereof.
- In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:
- N-(2-chlorophenyl)-N'-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-N'-(2-ethyl-6-methylphenyl)urea;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-N'-mesitylurea;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-N'-(2,4,6-trichlorophenyl)-urea;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-N'-(2,4,6-tribromophenyl)-urea;
- N-(2,4-dibromo-6-fluorophenyl)-N'-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)urea;
- N-(2,6-diethylphenyl)-N'-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)urea;
- N-(2-chlorobenzyl)-N'-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-N'-(2-ethyl-6-isopropylphenyl)urea;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)-N'-(2-isopropyl-6-methylphenyl)urea;

- N-(2-tert-butyl-6-methylphenyl)-N'-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-N'-(diphenylmethyl)urea;
- N-(4-bromo-2,6-dimethylphenyl)-N'-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-5 cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-N'-(3-methyl-5-phenylisoxazol-4-yl)urea;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-N'-1-naphthylurea;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-N'-[1-(1-naphthyl)ethyl]-10 urea;
- methyl N-[[[4-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-amino]carbonyl]-phenyl]alaninate;
- N-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)-N'-(3,4,5-trimethoxyphenyl)urea;
- 15 N-(5-chloro-2,4-dimethoxyphenyl)-N'-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)urea;
- N-(4-bromo-2-methylphenyl)-N'-(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)urea;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-N'-(2-ethyl-6-20 methylphenyl)urea;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-N'-mesitylurea;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-N'-(2,4,6-trichlorophenyl)urea;
- N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl)methyl]-N'-(2,4,6-25 tribromophenyl)urea;
- N-(2,4-dibromo-6-fluorophenyl)-N'-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)methyl]urea;
- N-(2,6-diethylphenyl)-N'-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)-

methyl]urea;

N-(2-chloro-6-(trifluoromethyl)phenyl)-N'-[(cis-4-{[4-(dimethylamino)-quinolin-2-yl]-amino} cyclohexyl)methyl]urea;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)methyl]-N'-(2-ethyl-6-isopropylphenyl)urea;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)methyl]-N'-(2-isopropyl-6-methylphenyl)urea;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)methyl]-N'-(2-methyl-3-nitrophenyl)urea;

N-(2-tert-butyl-6-methylphenyl)-N'-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)methyl]urea;

N-(2-tert-butylphenyl)-N'-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]-amino} cyclohexyl)-methyl]urea;

N-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino} cyclohexyl)methyl]-N'-

(diphenylmethyl)urea;

N-(4-bromo-2,6-dimethylphenyl)-N'-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]amino}-cyclohexyl)methyl]urea;

N-(2,3-dichlorophenyl)-N'-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]-amino} cyclohexyl)-methyl]urea;

N-(2,6-diisopropylphenyl)-N'-[(cis-4-{[4-(dimethylamino)quinolin-2-yl]-amino}-cyclohexyl)methyl]urea;

1-(2,3-dichloro-phenyl)-3-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexyl]-urea; and

1-(2,3-dichloro-phenyl)-3-[cis-4-(4-methyl-quinolin-2-ylamino)-cyclohexylmethyl]-urea;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-5</sub> alkyl, and

C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen, and

••C<sub>1-5</sub> alkoxy,

(ii) carbocyclyl,

(iii) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•cyano,

•nitro,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy carbonyl,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by halogen,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino, and

•carbocyclic aryl,

(iv) heterocyclyl, and

heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkoxy carbonyl, and

•carbocyclic aryl;

L is Formula (VII);

Y is -C(S)NR<sub>5</sub>;

wherein carbocyclic aryl is phenyl or naphthyl;

carbocyclyl is bicyclo[2.2.1]heptyl;

heterocyclyl is 2,3-dihydro-benzo[1,4]dioxinyl, benzo[1,3]dioxolyl,

isoxazolyl, or thienyl; and

5

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_2$  is methylamino or dimethylamino;  $p$  is 0;

$R_3$  and  $R_4$  are hydrogen;  $A$  is a single bond;  $B$  is a single bond or  $-CH_2-$ ;  $R_5$  is hydrogen; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

10

In some embodiments of the present invention,  $R_1$  is selected from the group consisting of:

(i) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

15

• $C_{1-5}$  alkyl,

• $C_{1-5}$  alkyl substituted by halogen,

• $C_{1-5}$  alkoxy,

•mono- $C_{1-5}$  alkylamino, and

•di- $C_{1-5}$  alkylamino,

20

(ii) heterocyclyl, and

heterocyclyl substituted by  $C_{1-5}$  alkyl, and

heterocyclyl substituted by  $C_{1-5}$  alkoxy carbonyl;

wherein carbocyclic aryl is phenyl or naphthyl;

heterocyclyl is thienyl; and

25

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

- N-(2,4-dimethoxyphenyl)-N'-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]-amino}cyclohexyl})-thiourea;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})-N'-(3,4,5-trimethoxyphenyl)thiourea;
- 5 N-[4-(dimethylamino)-1-naphthyl]-N'-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})thiourea;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})-N'-(2,4,6-tribromophenyl)-thiourea;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})-N'-(2,4,6-trichlorophenyl)-
- 10 thiourea;
- N-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})-N'-mesitylthiourea;
- N-(2,6-diethylphenyl)-N'-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})-thiourea;
- N-(4-bromo-2,6-dimethylphenyl)-N'-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})thiourea;
- 15 cyclohexylthiourea;
- N-(4-bromo-2-methylphenyl)-N'-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})thiourea;
- N-[4-bromo-2-(trifluoromethyl)phenyl]-N'-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})thiourea;
- 20 N-(5-chloro-2,4-dimethoxyphenyl)-N'-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})thiourea;
- N-(2,4-dibromo-6-fluorophenyl)-N'-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})thiourea;
- N-(2,4-dichloro-6-methylphenyl)-N'-(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})thiourea; and
- 25 methyl 3-({[(cis-4-{{[4-(dimethylamino)quinolin-2-yl]amino}cyclohexyl})-amino]-carbonothioyl]amino)-4-methylthiophene-2-carboxylate;
- or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-8</sub> alkyl, and

C<sub>1-8</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

•carbocyclyl,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••nitro, and

••C<sub>1-5</sub> alkoxy,

(ii) C<sub>2-5</sub> alkenyl,

(iii) carbocyclyl,

(iv) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by halogen, and

•C<sub>1-5</sub> alkoxy;

L is Formula (VII);

Y is -C(O)O-;

wherein carbocyclic aryl is phenyl or naphthyl;

carbocyclyl is 9H-fluorenyl or menthyl; and

halogen is fluoro, chloro, bromo, or iodo;



or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_2$  is methylamino or dimethylamino;  $p$  is 0;  $R_3$  and  $R_4$  are hydrogen;  $A$  is a single bond;  $B$  is a single bond or  $-CH_2-$ ; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

5 In some embodiments of the present invention,  $Q$  is Formula (III);

(i)  $C_{1-8}$  alkyl, and

$C_{1-8}$  alkyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

10 •oxo,

• $C_{1-5}$  alkoxy,

• $C_{1-5}$  alkoxy substituted by carbocyclic aryl,

• $C_{1-5}$  alkylcarbonyloxy,

•carbocyclic aryloxy,

15 •carbocyclic aryloxy substituted by halogen,

•carbocyclic aryloxy substituted by nitro,

•heterocyclyloxy,

•heterocyclyloxy substituted by  $C_{1-5}$  alkyl,

• $C_{1-5}$  alkoxycarbonyl,

20 •mono- $C_{1-5}$  alkylaminocarbonyl,

•di- $C_{1-5}$  alkylaminocarbonyl,

•mono- $C_{1-5}$  alkylamino,

•mono- $C_{1-5}$  alkylamino substituted by cyano,

•mono- $C_{1-5}$  alkylamino substituted by carbocyclic aryl,

25 •di- $C_{1-5}$  alkylamino,

•di- $C_{1-5}$  alkylamino substituted by cyano,

•di- $C_{1-5}$  alkylamino substituted by carbocyclic aryl,

•mono-carbocyclic arylamino,

- mono-carbocyclic arylamino substituted by C<sub>1-5</sub> alkyl,
- di-carbocyclic arylamino,
- di-carbocyclic arylamino substituted by C<sub>1-5</sub> alkyl,
- carbocyclic arylsulfonylamino,
- 5 •carbocyclic arylsulfonylamino substituted C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by substituent(s) independently selected from the group consisting of:
  - carbocyclic aryl,
  - 10 ••carbocyclic aryl substituted by halogen, and
  - carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,
  - carbocyclic arylthio,
  - heterocyclythio,
  - heterocyclythio substituted by C<sub>1-5</sub> alkyl,
  - 15 •C<sub>3-6</sub> cycloalkyl,
  - C<sub>3-6</sub> cycloalkenyl,
  - carbocyclyl,
  - carbocyclyl substituted by substituent(s) independently selected from the group consisting of:
    - halogen,
    - 20 ••C<sub>1-5</sub> alkyl,
    - C<sub>1-5</sub> alkoxy,
    - C<sub>2-5</sub> alkenyl, and
    - C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected
    - 25 from the group consisting of:
      - carbocyclic aryl, and
      - carbocyclic aryl substituted by C<sub>1-5</sub> alkylsulfinyl,
      - carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••hydroxy,

••nitro,

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•••oxo,

•••carbocyclic aryl, and

•••heterocyclyl,

••C<sub>2-5</sub> alkenyl,

••C<sub>1-5</sub> alkoxy,

••C<sub>1-5</sub> alkoxy substituted by halogen,

••C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

••carbocyclic aryloxy,

••mono-carbocyclic arylaminocarbonyl,

••mono-carbocyclic arylaminocarbonyl substituted by halogen,

••di-carbocyclic arylaminocarbonyl,

••di-carbocyclic arylaminocarbonyl substituted by halogen,

••carbocyclic aryl, and

••heterocyclyl,

•heterocyclyl, and

•heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkoxy,

••C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

- carbocyclic aryl, and
- carbocyclic aryl substituted by halogen,
- (ii) C<sub>2-7</sub> alkenyl, and  
C<sub>2-7</sub> alkenyl substituted by substituent(s) independently selected from the  
5 group consisting of:
  - carbocyclic aryl,
  - carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:
    - halogen,
    - 10 ••nitro, and
    - C<sub>1-5</sub> alkoxy,
- (iii) C<sub>2-5</sub> alkynyl,
- (iv) C<sub>3-12</sub> cycloalkyl, and  
C<sub>3-12</sub> cycloalkyl substituted by substituent(s) independently selected from the  
15 group consisting of:
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by oxo,
  - C<sub>1-5</sub> alkyl substituted by carbocyclic aryl, and
  - carbocyclic aryl,
- 20 (v) carbocyclyl,
- (vi) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:
  - halogen,
  - 25 •hydroxy,
  - cyano,
  - nitro,
  - C<sub>1-10</sub> alkyl,

•C<sub>1-10</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•oxo,

•carbocyclic aryloxy,

•carbocyclic aryl, and

•carbocyclic aryl substituted by C<sub>1-5</sub> alkyl,

•C<sub>1-7</sub> alkoxy,

•C<sub>1-7</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•carbocyclic aryl, and

•halogenated carbocyclic aryl,

•C<sub>2-5</sub> alkenyloxy,

•C<sub>3-6</sub> cycloalkoxy,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by nitro,

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,

•carboxy,

•C<sub>1-5</sub> alkoxycarbonyl,

•mono-C<sub>1-5</sub> alkylaminocarbonyl,

•di-C<sub>1-5</sub> alkylaminocarbonyl,

•mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,

•di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,

•amino,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino,

•mono-C<sub>1-5</sub> alkylamino substituted by cyano,

- di-C<sub>1-5</sub> alkylamino substituted by cyano,
- C<sub>2-5</sub> alkynylcarbonylamino,
- C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,
- C<sub>1-5</sub> alkoxy carbonylamino,
- 5     •(carbocyclic aryl)NHC(O)NH,
- (carbocyclic aryl)NHC(O)NH substituted by C<sub>1-5</sub> alkoxy,
- (carbocyclic aryl)NHC(O)NH substituted by halogenated C<sub>1-5</sub> alkoxy,
- carbocyclic aryl azo,
- carbocyclic aryl azo substituted by mono-C<sub>1-5</sub> alkylamino,
- 10    •carbocyclic aryl azo substituted by di-C<sub>1-5</sub> alkylamino,
- C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by halogen,
- carbocyclic arylthio,
- carbocyclic arylthio substituted by nitro,
- 15    •carbocyclic arylthio substituted by cyano,
- aminosulfonyl,
- mono-C<sub>1-5</sub> alkylaminosulfonyl,
- di-C<sub>1-5</sub> alkylaminosulfonyl,
- heterocyclysulfonyl,
- 20    •C<sub>3-6</sub> cycloalkyl,
- C<sub>3-6</sub> cycloalkyl substituted by C<sub>1-5</sub> alkyl,
- carbocyclic aryl,
- heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the
- 25    group consisting of:
  - C<sub>1-5</sub> alkyl,
  - carbocyclic aryl, and
  - halogenated carbocyclic aryl,

(vii) heterocyclyl, and

heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

5

•nitro,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

10

••hydroxy,

••C<sub>1-5</sub> alkylthio,

••C<sub>1-5</sub> alkylthio substituted by carbocyclic aryl,

••C<sub>1-5</sub> alkylthio substituted by halogenated carbocyclic aryl,

••carbocyclic aryl,

15

••carbocyclic aryl substituted by halogen, and

••heterocyclyl,

•C<sub>1-5</sub> alkoxy,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,

20

•C<sub>1-5</sub> alkylthio,

•C<sub>2-5</sub> alkenylthio,

•carbocyclic arylthio,

•carbocyclic arylthio substituted by C<sub>1-5</sub> alkoxy carbonyl,

•C<sub>1-5</sub> alkylsulfonfyl,

25

•carbocyclic arylsulfonfyl,

•carbocyclic arylsulfonfyl substituted by C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkoxy carbonyl,

•C<sub>1-5</sub> alkoxy carbonyl substituted by carbocyclic aryl,

\*carbocyclic aryl,

\*carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

\*\*halogen,

\*\*nitro,

\*\*C<sub>1-5</sub> alkyl, and

\*\*C<sub>1-5</sub> alkyl substituted by halogen,

\*heterocyclyl;

wherein carbocyclic aryl is phenyl, naphthyl, or anthranyl;

carbocyclyl is 1,2,3,4-tetrahydronaphthyl, 1-oxo-indanyl, 9-fluorenyl,

9H-fluorenyl, 9-oxo-9H-fluorenyl, adamantly, bicyclo[2.2.1]heptenyl,

bicyclo[2.2.1]heptyl, indanyl, indenyl, or menthyl;

heterocyclyl is 1,2,3-triazolyl, 1H-indolyl, 1H-pyrrolyl,

2,3-dihydro-1-oxo-isoindolyl, 2,3-dihydro-benzo[1,4]dioxinyl,

2,4-dihydro-3-oxo-pyrazolyl, 2H-benzopyranyl, 2-oxo-benzopyranyl,

3,4-dihydro-2H-benzo[b][1,4]dioxepinyl, 4,5,6,7-tetrahydro-benzo[b]thienyl,

4H-benzo[1,3]dioxinyl, 4-oxo-1,5,6,7-tetrahydro-indolyl, 4-oxo-benzopyranyl,

9H-carbazolyl, 9H-xanthenyl, azetidiny, benzo[1,3]dioxolyl,

benzo[2,1,3]oxadiazolyl, benzo[1,2,5]oxadiazolyl, benzo[2,1,3]thiadiazolyl,

benzo[b]thienyl, benzofuryl, benzothiazolyl, furyl, imidazo[2,1-b]thiazolyl,

isoxazolyl, morpholino, morpholinyl, oxazolyl, phenanthro[9,10-d]oxazolyl,

piperidyl, pyrazolyl, pyridyl, pyrimidyl, quinolyl, quinoxalyl, tetrahydrofuryl,

thiazolyl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-7</sub> alkyl, and

C<sub>1-7</sub> alkyl substituted by substituent(s) independently selected from the group



consisting of:

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

•carbocyclic aryloxy,

5 •mono-C<sub>1-5</sub> alkylamino,

•mono-C<sub>1-5</sub> alkylamino substituted by substituent(s) independently selected from the group consisting of:

••cyano, and

••carbocyclic aryl,

10 •di-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino substituted by substituent(s) independently selected from the group consisting of:

••cyano, and

••carbocyclic aryl,

15 •mono-carbocyclic arylamino,

•di-carbocyclic arylamino,

•mono-carbocyclic arylamino substituted by C<sub>1-5</sub> alkyl,

•di-carbocyclic arylamino substituted by C<sub>1-5</sub> alkyl,

•carbocyclic arylsulfonylamino,

20 •carbocyclic arylsulfonylamino substituted by C<sub>1-5</sub> alkyl,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

25 ••nitro,

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•••oxo, and

•••carbocyclic aryl,

••C<sub>1-5</sub> alkoxy,

•heterocyclyl, and

5 •heterocyclyl substituted by carbocyclic aryl,

(ii) C<sub>2-7</sub> alkenyl, and

C<sub>2-7</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl, and

10 •carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,

(iii) C<sub>3-6</sub> cycloalkyl, and

C<sub>3-6</sub> cycloalkyl substituted by substituent(s) independently selected from the group consisting of:

•C<sub>1-5</sub> alkyl, and

15 •C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,

(iv) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

20 •hydroxy,

•cyano,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy,

25 •C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

••halogen, and

••carbocyclic aryl,

- carbocyclic aryl substituted by halogen,
- C<sub>2-5</sub> alkenyloxy,
- mono-C<sub>1-5</sub> alkylamino,
- di-C<sub>1-5</sub> alkylamino,
- 5 •mono-C<sub>1-5</sub> alkylamino substituted by cyano,
- di-C<sub>1-5</sub> alkylamino substituted by cyano,
- C<sub>1-5</sub> alkylthio, and
- C<sub>1-5</sub> alkylthio substituted by halogen,
- (v) heterocyclyl, and
- 10 heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the
  - 15 group consisting of:
    - hydroxy, and
    - carbocyclic aryl,
    - C<sub>1-5</sub> alkoxy,
    - carbocyclic arylthio,
    - 20 •carbocyclic arylthio substituted by C<sub>1-5</sub> alkoxycarbonyl,
    - C<sub>1-5</sub> alkoxycarbonyl,
    - carbocyclic aryl,
    - carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
      - 25 ••halogen,
      - C<sub>1-5</sub> alkyl, and
      - C<sub>1-5</sub> alkyl substituted by halogen;

L is Formula (VII);

Y is a single bond or  $-\text{CH}_2-$ ;

wherein carbocyclic aryl is phenyl or naphthyl;

heterocyclyl is 1*H*-indolyl, 1*H*-pyrrolyl, 2,3-dihydro-benzo[1,4]dioxinyl,

4-oxo-benzopyranyl, 9*H*-carbazolyl, azetidiny, benzo[1,3]dioxolyl, benzo[b]thienyl,

5 furyl, imidazo[2,1-*b*]thiazolyl, pyrazolyl, pyridyl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $\text{R}_2$  is methylamino or dimethylamino; *p* is 0;

$\text{R}_3$  and  $\text{R}_4$  are hydrogen; A is a single bond; B is a single bond or  $-\text{CH}_2-$ ; or a pharmaceutically

10 acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $\text{R}_1$  is selected from the group consisting of:

(i)  $\text{C}_{1-5}$  alkyl, and

$\text{C}_{1-5}$  alkyl substituted by substituent(s) independently selected from the group consisting of:

15 •mono- $\text{C}_{1-5}$  alkylamino,

•mono- $\text{C}_{1-5}$  alkylamino substituted by cyano,

•di- $\text{C}_{1-5}$  alkylamino,

•di- $\text{C}_{1-5}$  alkylamino substituted by cyano,

•mono-carbocyclic arylamino,

20 •di-carbocyclic arylamino,

•mono-carbocyclic arylamino substituted by  $\text{C}_{1-5}$  alkyl,

•di-carbocyclic arylamino substituted by  $\text{C}_{1-5}$  alkyl,

•carbocyclic arylsulfonylamino,

•carbocyclic arylsulfonylamino substituted by  $\text{C}_{1-5}$  alkyl,

25 •carbocyclic aryl, and

•carbocyclic aryl substituted by  $\text{C}_{1-5}$  alkoxy,

(ii)  $\text{C}_{2-5}$  alkenyl, and

$\text{C}_{2-5}$  alkenyl substituted by carbocyclic aryl,

- (iii) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:
- halogen,
  - hydroxy,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxy substituted by halogen,
  - mono-C<sub>1-5</sub> alkylamino, and
  - di-C<sub>1-5</sub> alkylamino,
- (iv) heterocyclyl, and  
heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
- halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,
  - C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxycarbonyl,
  - carbocyclic aryl,
  - carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:
- halogen,
  - C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkyl substituted by halogen;
- wherein carbocyclic aryl is phenyl or naphthyl;  
heterocyclyl is 1*H*-indolyl, 4-oxo-benzopyranyl, azetidinyl,  
benzo[1,3]dioxolyl, or pyrazolyl; and  
halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_1$  is selected from the group consisting of:

- 5 (i)  $C_{1-5}$  alkyl, and  
 $C_{1-5}$  alkyl substituted by substituent(s) independently selected from the group consisting of:  
•mono- $C_{1-5}$  alkylamino,  
•mono- $C_{1-5}$  alkylamino substituted by cyano,  
•di- $C_{1-5}$  alkylamino,  
•di- $C_{1-5}$  alkylamino substituted by cyano,  
10 •mono-carbocyclic arylamino,  
•di-carbocyclic arylamino,  
•carbocyclic arylsulfonylamino,  
•carbocyclic arylsulfonylamino substituted by  $C_{1-5}$  alkyl, and  
•carbocyclic aryl,  
15 (ii)  $C_{2-5}$  alkenyl, and  
 $C_{2-5}$  alkenyl substituted by carbocyclic aryl,  
(iii) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:  
20 •halogen,  
•hydroxy,  
• $C_{1-5}$  alkoxy, and  
• $C_{1-5}$  alkoxy substituted by halogen,  
(iv) heterocyclyl, and  
25 heterocyclyl substituted by substituent(s) independently selected from the group consisting of:  
•halogen,  
• $C_{1-5}$  alkyl,

- C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,
  - C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxy carbonyl,
  - carbocyclic aryl, and
- 5       •carbocyclic aryl substituted by halogen;
- wherein carbocyclic aryl is phenyl;
- heterocycl is 1H-indolyl, azetidiny, or pyrazolyl; and
- halogen is fluoro, chloro, bromo, or iodo;
- or a pharmaceutically acceptable salt, hydrate, or solvate thereof.
- 10       In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:
- N<sup>2</sup>-(cis-4-[(2,6-dimethoxybenzyl)amino]cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- N<sup>2</sup>-(cis-4-[(2-ethoxybenzyl)amino]cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-
- 15       tetrahydroquinazoline-2,4-diamine;
- N<sup>2</sup>-(cis-4-[(1H-indol-3-ylmethyl)amino]cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-
- 20       tetrahydroquinazoline-2,4-diamine;
- N<sup>2</sup>-(cis-4-[(2,5-dimethoxybenzyl)amino]cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-
- 25       tetrahydroquinazoline-2,4-diamine;
- N<sup>2</sup>-(cis-4-[[[4-methoxy-1-naphthyl)methyl]amino]cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-
- 30       tetrahydroquinazoline-2,4-diamine;
- N<sup>2</sup>-(cis-4-[[[5-methoxy-1H-indol-3-yl)methyl]amino]cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-
- 35       tetrahydroquinazoline-2,4-diamine;
- 4-bromo-2-[[[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino]-
- 40       cyclohexyl]amino]methyl]-6-methoxyphenol;
- N<sup>2</sup>-(cis-4-[[[5-bromo-1H-indol-3-yl)methyl]amino]cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-
- 45       tetrahydroquinazoline-2,4-diamine;
- 4-[[[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino]-cyclohexyl]-

- amino]methyl)-2,6-dimethoxyphenol;
- $N^2$ -(cis-4-[(3-ethoxy-4-methoxybenzyl)amino]cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-[(3-[4-(trifluoromethyl)phenyl]-1H-pyrazol-4-yl)methyl]-amino]cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- 5  $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-[(3,4,5-trimethoxybenzyl)amino]cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-[(pentamethylbenzyl)amino]cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- 10  $N^2$ -(cis-4-[(3,5-dimethoxybenzyl)amino]cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- 4-[(cis-4-[[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino]-cyclohexyl)-amino]methyl)-2-iodo-6-methoxyphenol;
- 4-[(cis-4-[[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino]-cyclohexyl)-amino]methyl)-2,6-dimethylphenol;
- 15 3-[(cis-4-[[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino]-cyclohexyl)-amino]methyl)-6,8-dimethyl-4H-chromen-4-one;
- ethyl 4,6-dichloro-3-[(cis-4-[[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino]cyclohexyl)amino]methyl)-1H-indole-2-carboxylate;
- 20  $N^2$ -(cis-4-[(3-[4-fluorophenyl]-1H-pyrazol-4-yl)methyl]amino)cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -[4-(pentamethylphenylmethyl-amino)-cyclohexyl]-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- 3-[(2-[(cis-4-[[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino]cyclohexyl)-amino]ethyl)(3-methylphenyl)amino]propanenitrile;
- 25 3-[(2-[(cis-4-[[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino]cyclohexyl)-amino]ethyl)(phenyl)amino]propanenitrile;
- $N$ -{(1S)-1-benzyl-2-[(cis-4-[[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino]-



- cyclohexyl)amino]ethyl}-4-methylbenzenesulfonamide;
- $N^2$ -(cis-4-{{2-(3,5-dimethoxyphenyl)ethyl}amino}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{1-(diphenylmethyl)azetidin-3-yl}methyl}amino)cyclohexyl]- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(2,6-dimethoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(2-ethoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(1H-indol-3-ylmethyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(2,5-dimethoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(4-methoxy-1-naphthyl)methyl}amino}methyl)cyclohexyl]- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(5-methoxy-1H-indol-3-yl)methyl}amino}methyl)cyclohexyl]- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- 4-bromo-2-{{(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)methyl}amino}methyl}-6-methoxyphenol;
- $N^2$ -(cis-4-{{(5-bromo-1H-indol-3-yl)methyl}amino}methyl)cyclohexyl]- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(3-ethoxy-4-methoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-{{(3-[4-(trifluoromethyl)phenyl]-1H-pyrazol-4-yl)methyl}-amino}methyl)cyclohexyl]-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-{{(3,4,5-trimethoxybenzyl)amino}methyl}cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(3,5-dimethoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-

tetrahydroquinazoline-2,4-diamine;

4-({[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)-methyl]amino} methyl)-2-iodo-6-methoxyphenol;

4-({[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)-methyl]amino} methyl)-2,6-dimethylphenol;

3-chloro-4-({[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]amino} methyl)phenol;

N<sup>2</sup>-[cis-4-({[4-(diethylamino)benzyl]amino} methyl)cyclohexyl]-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

N<sup>2</sup>-(cis-4-({[(3,3-diphenylprop-2-en-1-yl)amino]methyl} cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

4-({[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)-methyl]amino} methyl)-2-ethoxyphenol;

N<sup>2</sup>-(cis-4-({[4-(dimethylamino)-1-naphthyl]methyl} amino)methyl)-cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

N<sup>4</sup>,N<sup>4</sup>-dimethyl-N<sup>2</sup>-(cis-4-({[(2,4,6-trimethoxybenzyl)amino]methyl}-cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

2-bromo-4-chloro-6-({[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)methyl]amino} methyl)phenol;

N<sup>2</sup>-(cis-4-({[(2,5-diethoxybenzyl)amino]methyl} cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

N<sup>2</sup>-(cis-4-({[(2,4-diethoxybenzyl)amino]methyl} cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

N<sup>2</sup>-(cis-4-({[(3,5-dibromo-2-methoxybenzyl)amino]methyl} cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

N<sup>4</sup>,N<sup>4</sup>-dimethyl-N<sup>2</sup>-(cis-4-({[(2,4,5-triethoxybenzyl)amino]methyl}-cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

N<sup>4</sup>,N<sup>4</sup>-dimethyl-N<sup>2</sup>-(cis-4-({[(2,4,5-trimethoxybenzyl)amino]methyl}-cyclohexyl)-5,6,7,8-

tetrahydroquinazoline-2,4-diamine;

$N^2$ -[cis-4-({[(7-methoxy-1,3-benzodioxol-5-yl)methyl]amino}methyl)-cyclohexyl]- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

4-({[cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl}-methyl]amino}methyl)-2-methylphenol;

$N^2$ -(cis-4-{{[(4-methoxy-2,5-dimethylbenzyl)amino]methyl}cyclohexyl})- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

4-({[cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl}-methyl]amino}methyl)-2-fluoro-6-methoxyphenol;

10  $N^4$ , $N^4$ -dimethyl- $N^2$ -[cis-4-({[(1-phenyl-5-propyl-1H-pyrazol-4-yl)methyl]amino}methyl)-cyclohexyl]-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

$N^2$ -(cis-4-({[1-(4-chlorophenyl)-5-propyl-1H-pyrazol-4-yl]methyl}-amino)methyl)-cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

$N^2$ -(cis-4-[2-(4-bromo-2-trifluoromethoxy-phenyl)-ethylamino]-cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

$N^2$ -(cis-4-[2-(4-bromo-2-trifluoromethoxy-phenyl)-ethylamino]-cyclohexyl)- $N^4$ -methyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

$N^2$ -(cis-4-[(4-bromo-2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl)- $N^4$ -methyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

20  $N^2$ -(cis-4-[(4-bromo-2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

$N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-[(2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine; and

$N^4$ -methyl- $N^2$ -(cis-4-[(2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

- $N^2$ -(cis-4-{{(5-methoxy-1H-indol-3-yl)methyl}amino}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- ethyl 4,6-dichloro-3-{{(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]-amino}cyclohexyl}amino)methyl}-1H-indole-2-carboxylate;
- 5  $N^2$ -(cis-4-{{[3-(4-fluorophenyl)-1H-pyrazol-4-yl]methyl}amino}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- 3-{{2-{{(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)-amino}ethyl}(phenyl)amino}propanenitrile;
- $N$ -{(1S)-1-benzyl-2-{{(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-
- 10 cyclohexyl)amino}ethyl)-4-methylbenzenesulfonamide;
- $N^2$ -(cis-4-{{[1-(diphenylmethyl)azetidin-3-yl]methyl}amino}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(2,6-dimethoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- 15  $N^2$ -(cis-4-{{(5-methoxy-1H-indol-3-yl)methyl}amino}methyl)cyclohexyl]- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(5-bromo-1H-indol-3-yl)methyl}amino}methyl)cyclohexyl]- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(3-ethoxy-4-methoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-
- 20 tetrahydroquinazoline-2,4-diamine;
- 4-{{(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)-methyl}amino}methyl)-2-iodo-6-methoxyphenol;
- $N^2$ -(cis-4-{{(3,3-diphenylprop-2-en-1-yl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- 25  $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-{{(2,4,6-trimethoxybenzyl)amino}methyl}-cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{{(2,5-diethoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;

- $N^2$ -(cis-4-{[(2,4-diethoxybenzyl)amino]methyl} cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-{[(3,5-dibromo-2-methoxybenzyl)amino]methyl} cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- 5  $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-{[(2,4,5-triethoxybenzyl)amino]methyl}-cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-{[(2,4,5-trimethoxybenzyl)amino]methyl}-cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-{[(1-phenyl-5-propyl-1H-pyrazol-4-yl)methyl]amino} methyl)-cyclohexyl)-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- 10  $N^2$ -(cis-4-{[(1-(4-chlorophenyl)-5-propyl-1H-pyrazol-4-yl)methyl]-amino}methyl)-cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydroquinazoline-2,4-diamine;
- $N^2$ -(cis-4-[2-(4-bromo-2-trifluoromethoxy-phenyl)-ethylamino]-cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydro-quinazoline-2,4-diamine;
- 15  $N^2$ -(cis-4-[(4-bromo-2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl)- $N^4$ -methyl-5,6,7,8-tetrahydro-quinazoline-2,4-diamine;
- $N^2$ -(cis-4-[(4-bromo-2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl)- $N^4$ , $N^4$ -dimethyl-5,6,7,8-tetrahydro-quinazoline-2,4-diamine; and
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-[(2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl)-5,6,7,8-tetrahydro-quinazoline-2,4-diamine;
- 20 tetrahydro-quinazoline-2,4-diamine;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_1$  is selected from the group consisting of:

(i)  $C_{1-5}$  alkyl, and

$C_{1-5}$  alkyl substituted by substituent(s) independently selected from the group consisting of:

•oxo,

• $C_{1-5}$  alkoxy,

• $C_{1-5}$  alkoxy substituted by carbocyclic aryl,

- C<sub>1-5</sub> alkylcarbonyloxy,
- carbocyclic aryloxy,
- carbocyclic aryloxy substituted by halogen,
- carbocyclic aryloxy substituted by nitro,
- 5 •heterocyclyloxy,
- heterocyclyloxy substituted by C<sub>1-5</sub> alkyl,
- mono-C<sub>1-5</sub> alkylaminocarbonyl,
- di-C<sub>1-5</sub> alkylaminocarbonyl,
- carbocyclic arylcarbonylamino,
- 10 •C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by substituent(s) independently selected from the group consisting of:
  - carbocyclic aryl, and
  - carbocyclic aryl substituted by substituent(s) independently
  - 15 selected from the group consisting of:
    - halogen, and
    - C<sub>1-5</sub> alkoxy,
- carbocyclic arylthio,
- heterocyclythio,
- 20 •heterocyclythio substituted by C<sub>1-5</sub> alkyl,
- C<sub>3-6</sub> cycloalkyl,
- C<sub>3-6</sub> cycloalkenyl,
- carbocyclyl,
- carbocyclyl substituted by substituent(s) independently selected from the
- 25 group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkoxy,

\*\*C<sub>2-3</sub> alkenyl, and

\*\*C<sub>2-3</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:

\*\*\*carbocyclic aryl, and

\*\*\*carbocyclic aryl substituted by C<sub>1-3</sub> alkylsulfinyl,

\*carbocyclic aryl,

\*carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

\*\*halogen,

\*\*hydroxy,

\*\*nitro,

\*\*C<sub>1-3</sub> alkyl,

\*\*C<sub>1-3</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

\*\*\*oxo,

\*\*\*carbocyclic aryl, and

\*\*heterocyclyl,

\*\*C<sub>1-3</sub> alkoxy,

\*\*C<sub>1-3</sub> alkoxy substituted by halogen,

\*\*C<sub>1-3</sub> alkoxy substituted by carbocyclic aryl,

\*\*carbocyclic aryloxy,

\*\*mono-carbocyclic arylaminocarbonyl,

\*\*mono-carbocyclic arylaminocarbonyl substituted by halogen,

\*\*di-carbocyclic arylaminocarbonyl,

\*\*di-carbocyclic arylaminocarbonyl substituted by halogen,

\*\*carbocyclic aryl, and

\*\*heterocyclyl,

\*heterocyclyl, and

•heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkoxy,

••C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

••carbocyclic aryl, and

••carbocyclic aryl substituted by halogen,

(ii) C<sub>2-5</sub> alkenyl, and

C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen, and

••nitro,

(iii) C<sub>3-6</sub> cycloalkyl, and

C<sub>3-6</sub> cycloalkyl substituted by substituent(s) independently selected from the group consisting of:

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

••oxo, and

••carbocyclic aryl,

•carbocyclic aryl,

(iv) carbocyclyl,

(v) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:



- halogen,
- hydroxy,
- cyano,
- nitro,
- 5      •C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the  
        group consisting of:
  - halogen,
  - oxo,
  - 10          ••carbocyclic aryloxy,
  - carbocyclic aryl, and
  - carbocyclic aryl substituted by C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the  
15          group consisting of:
    - halogen, and
    - carbocyclic aryl,
    - carbocyclic aryloxy,
    - carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
    - 20          •mono-C<sub>1-5</sub> alkylaminocarbonyl,
    - di-C<sub>1-5</sub> alkylaminocarbonyl,
    - mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
    - di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
    - amino,
    - 25          •mono-C<sub>1-5</sub> alkylamino,
    - di-C<sub>1-5</sub> alkylamino,
    - C<sub>2-5</sub> alkynylcarbonylamino,
    - C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,

- (carbocyclic aryl)NHC(O)NH,
- (carbocyclic aryl)NHC(O)NH substituted by C<sub>1-5</sub> alkoxy,
- (carbocyclic aryl)NHC(O)NH substituted by halogenated C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkylthio,
- 5      •C<sub>1-5</sub> alkylthio substituted by halogen,
- carbocyclic arylthio,
- carbocyclic arylthio substituted by cyano,
- mono-C<sub>1-5</sub> alkylaminosulfonyl,
- di-C<sub>1-5</sub> alkylaminosulfonyl,
- 10      •carbocyclic aryl,
- heterocyclyl,
- heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
  - C<sub>1-5</sub> alkyl,
  - 15      ••carbocyclic aryl, and
  - halogenated carbocyclic aryl,
- (vi) heterocyclyl, and  
heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
  - 20      •halogen,
  - nitro,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the  
group consisting of:
    - 25      ••halogen,
    - C<sub>1-5</sub> alkylthio,
    - C<sub>1-5</sub> alkylthio substituted by carbocyclic aryl,
    - C<sub>1-5</sub> alkylthio substituted by halogenated carbocyclic aryl,

- carbocyclic aryl,  
••carbocyclic aryl substituted by halogen, and  
••heterocyclyl,  
•C<sub>1-5</sub> alkoxy,  
•carbocyclic aryloxy,  
•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,  
•C<sub>1-5</sub> alkylthio,  
•C<sub>2-5</sub> alkenylthio,  
•carbocyclic arylthio,  
•C<sub>1-5</sub> alkylsulfonyl,  
•carbocyclic arylsulfonyl,  
•carbocyclic arylsulfonyl substituted by C<sub>1-5</sub> alkyl,  
•carbocyclic aryl,  
•carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:  
••halogen,  
••nitro, and  
••C<sub>1-5</sub> alkyl,  
•heterocyclyl;  
L is Formula (VII);  
Y is -C(O)-;  
wherein carbocyclic aryl is phenyl, naphthyl, or anthranyl;  
carbocyclyl is 1,2,3,4-tetrahydronaphthyl, 1-oxo-indanyl,  
9-oxo-9H-fluorenyl, or indenyl;  
heterocyclyl is 1,2,3-triazolyl, 1H-indolyl, 1H-pyrrolyl,  
2,3-dihydro-1-oxo-isindolyl, 2,4-dihydro-3-oxo-pyrazolyl, 2H-benzopyranyl,  
2-oxo-benzopyranyl, 4-oxo-1,5,6,7-tetrahydro-indolyl, 9H-xanthenyl,  
benzo[1,3]dioxolyl, benzo[2,1,3]oxadiazolyl, benzo[1,2,5]oxadiazolyl,

benzo[b]thienyl, benzofuryl, benzothiazolyl, furyl, isoxazolyl, morpholino, pyrazolyl, pyridyl, pyrimidyl, quinolyl, quinoxalyl, thiazolyl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

- 5 In some embodiments of the present invention, R<sub>2</sub> is methylamino or dimethylamino; p is 0; R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single bond; B is a single bond or -CH<sub>2</sub>-; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

- (i) C<sub>1-5</sub> alkyl, and
- 10 C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
- oxo,
  - C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,
  - 15 •C<sub>1-5</sub> alkylcarbonyloxy,
  - carbocyclic aryloxy,
  - carbocyclic aryloxy substituted by halogen,
  - mono-C<sub>1-5</sub> alkylaminocarbonyl,
  - di-C<sub>1-5</sub> alkylaminocarbonyl,
  - 20 •carbocyclic arylcarbonylamino,
  - C<sub>1-5</sub> alkylthio,
  - C<sub>1-5</sub> alkylthio substituted by substituent(s) independently selected from the group consisting of:
  - carbocyclic aryl, and
  - 25 ••carbocyclic aryl substituted by halogen,
  - heterocyclithio,
  - heterocyclithio substituted by C<sub>1-5</sub> alkyl,
  - C<sub>3-6</sub> cycloalkyl,

•carbocyclyl,

•carbocyclyl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••C<sub>1-5</sub> alkyl,

••C<sub>2-5</sub> alkenyl, and

••C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:

•••carbocyclic aryl, and

•••carbocyclic aryl substituted by C<sub>1-5</sub> alkylsulfanyl,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••hydroxy,

••nitro,

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•••oxo, and

•••heterocyclyl,

••C<sub>1-5</sub> alkoxy,

••carbocyclic aryloxy,

••carbocyclic aryl, and

••heterocyclyl,

•heterocyclyl, and

•heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

- C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkoxy, and
  - carbocyclic aryl,
- (ii) C<sub>2-5</sub> alkenyl, and
- 5 C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:
- carbocyclic aryl, and
  - carbocyclic aryl substituted by nitro,
- (iii) C<sub>3-6</sub> cycloalkyl, and
- 10 C<sub>3-6</sub> cycloalkyl substituted by carbocyclic aryl,
- (iv) carbocyclyl,
- (v) carbocyclic aryl, and
- carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
- 15 •halogen,
- hydroxy,
- cyano,
- nitro,
- C<sub>1-5</sub> alkyl,
- 20 •C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
- halogen,
  - oxo, and
  - carbocyclic aryl,
- 25 •C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:
- halogen, and

- carbocyclic aryl,
- carbocyclic aryloxy,
- carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
- mono-C<sub>1-5</sub> alkylaminocarbonyl,
- 5 •di-C<sub>1-5</sub> alkylaminocarbonyl,
- mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
- di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
- mono-C<sub>1-5</sub> alkylamino,
- di-C<sub>1-5</sub> alkylamino,
- 10 •C<sub>2-5</sub> alkynylcarbonylamino,
- C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,
- (carbocyclic aryl)NHC(O)NH<sub>2</sub>,
- (carbocyclic aryl)NHC(O)NH substituted by C<sub>1-5</sub> alkoxy, and
- (carbocyclic aryl)NHC(O)NH substituted by halogenated C<sub>1-5</sub> alkoxy,
- 15 (vi) heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - nitro,
  - 20 •C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
    - halogen,
    - C<sub>1-5</sub> alkylthio,
    - 25 ••C<sub>1-5</sub> alkylthio substituted by carbocyclic aryl,
    - C<sub>1-5</sub> alkylthio substituted by halogenated carbocyclic aryl,
    - carbocyclic aryl, and
    - heterocyclyl,

- carbocyclic aryloxy,  
•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,  
•C<sub>1-5</sub> alkylthio,  
•carbocyclic aryl,  
5 •carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:  
    ••halogen,  
    ••nitro, and  
    ••C<sub>1-5</sub> alkyl,  
10 •heterocyclyl;  
wherein carbocyclic aryl is phenyl;  
carbocyclyl is 1-oxo-indanyl or indenyl;  
heterocyclyl is 1,2,3-triazolyl, 1*H*-indolyl, 1*H*-pyrrolyl,  
2,3-dihydro-1-oxo-isoindolyl, 2-oxo-benzopyranyl, benzo[2,1,3]oxadiazolyl,  
15 benzo[1,2,5]oxadiazolyl, furyl, isoxazolyl, morpholino, pyrazolyl, pyridyl, pyrimidyl, quinolyl, quinoxalyl, thiazolyl, or thienyl;  
halogen is fluoro, chloro, bromo, or iodo;  
or a pharmaceutically acceptable salt, hydrate, or solvate thereof.
- In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:
- 20 (i) C<sub>1-5</sub> alkyl, and  
C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:  
    •oxo,  
    •C<sub>1-5</sub> alkylcarbonyloxy,  
25 •carbocyclic aryloxy,  
•carbocyclic aryloxy substituted by halogen,  
•mono-C<sub>1-5</sub> alkylaminocarbonyl,  
•di-C<sub>1-5</sub> alkylaminocarbonyl,



\*carbocyclic arylcarbonylamino,

\*carbocyclyl,

\*carbocyclyl substituted by substituent(s) independently selected from the group consisting of:

5

\*\*halogen,

\*\*C<sub>1-5</sub> alkyl,

\*\*C<sub>2-5</sub> alkenyl, and

\*\*C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:

10

\*\*\*carbocyclic aryl, and

\*\*\*carbocyclic aryl substituted by C<sub>1-5</sub> alkylsulfinyl,

\*carbocyclic aryl,

\*carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

15

\*\*halogen,

\*\*hydroxy,

\*\*nitro,

\*\*C<sub>1-5</sub> alkyl, and

\*\*C<sub>1-5</sub> alkoxy,

20

\*heterocyclyl, and

\*heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

\*\*C<sub>1-5</sub> alkyl,

\*\*C<sub>1-5</sub> alkoxy, and

25

\*\*carbocyclic aryl,

(ii) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

- halogen,
- hydroxy,
- cyano,
- nitro,
- 5 •C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
  - halogen, and
  - oxo,
- 10 •C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,
- carbocyclic aryloxy,
- carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
- mono-C<sub>1-5</sub> alkylaminocarbonyl,
- 15 •di-C<sub>1-5</sub> alkylaminocarbonyl,
- mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
- di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
- C<sub>2-5</sub> alkynylcarbonylamino,
- C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,
- 20 •(carbocyclic aryl)NHC(O)NH,
- (carbocyclic aryl)NHC(O)NH substituted by C<sub>1-5</sub> alkoxy, and
- (carbocyclic aryl)NHC(O)NH substituted by halogenated C<sub>1-5</sub> alkoxy,
- (iii) heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the
- 25 group consisting of:
  - halogen,
  - nitro,
  - C<sub>1-5</sub> alkyl,

- \*C<sub>1-5</sub> alkyl substituted by halogen,
  - \*C<sub>1-5</sub> alkyl substituted by heterocyclyl,
  - \*carbocyclic aryloxy,
  - \*carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,
  - 5        \*C<sub>1-5</sub> alkylthio,
  - \*carbocyclic aryl,
  - \*carbocyclic aryl substituted by halogen, and
  - \*carbocyclic aryl substituted by nitro;
  - wherein carbocyclic aryl is phenyl;
  - 10       carbocyclyl is indenyl;
  - heterocyclyl is 1*H*-indolyl, 1*H*-pyrrolyl, 2-oxo-benzopyranyl,
  - benzo[2,1,3]oxadiazolyl, benzo[1,2,5]oxadiazolyl, furyl, isoxazolyl, morpholino,
  - pyridyl, quinoxalyl, or thienyl; and
  - halogen is fluoro, chloro, bromo, or iodo;
  - 15       or a pharmaceutically acceptable salt, hydrate, or solvate thereof.
- In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-methoxybenzamide;
  - 20       3-bromo-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)benzamide;
  - 4-bromo-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)benzamide;
  - N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2,1,3-
  - 25       benzoxadiazole-5-carboxamide;
  - 3-chloro-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)benzamide;
  - 4-chloro-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-

- cyclohexyl)benzamide;
- 4-chloro-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-nitrobenzamide;
- 2-(4-chlorophenyl)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino})cyclohexyl)acetamide;
- 5      3-cyano-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)benzamide;
- 3,5-dichloro-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)benzamide;
- 10      3,4-dichloro-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)benzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2,2-diphenylacetamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3,4-
- 15      difluorobenzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3,5-difluorobenzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-4-fluorobenzamide;
- 20      N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-fluoro-5-(trifluoromethyl)benzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-hexanamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-4-
- 25      methyl-3-nitrobenzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-nitrobenzamide;
- (2R)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)-2-

phenylcyclopropanecarboxamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-phenoxybutanamide;

5 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-phenoxypropanamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-3-methylbenzamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-4-methylbenzamide;

10 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-3-(trifluoromethoxy)benzamide;

4-bromo-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-3-methylbenzamide;

15 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-3-iodobenzamide;

2-chloro-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-4-fluorobenzamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-(3-methoxyphenyl)acetamide;

20 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-(4-fluorophenyl)acetamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-(4-methoxyphenyl)acetamide;

25 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-5-methyl-2-(trifluoromethyl)-3-furamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2,5-dimethyl-3-furamide;

3-chloro-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-

cyclohexyl)-4-fluorobenzamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-3-fluoro-4-methylbenzamide;

5 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-3,5-dimethoxybenzamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-3,5-bis(trifluoromethyl)benzamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-4-fluoro-3-methylbenzamide;

10 2,5-dichloro-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)thiophene-3-carboxamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-(propylthio)nicotinamide;

15 1-benzyl-3-tert-butyl-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino} cyclohexyl)-1H-pyrazole-5-carboxamide;

5-bromo-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)nicotinamide;

2-[(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino)-cyclohexyl]-amino]-2-oxo-1-phenylethyl acetate;

20 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-benzamide;

2-(benzyloxy)-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)acetamide;

25 2-(4-chlorophenoxy)-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino} cyclohexyl)acetamide;

3-(2-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino} cyclohexyl)-5-methylisoxazole-4-carboxamide;

1-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino} cyclohexyl)-5-methylisoxazole-4-carboxamide;

- amino} cyclohexyl)cyclopentanecarboxamide;
- 3-(2-chloro-6-fluorophenyl)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)-5-methylisoxazole-4-carboxamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-1,3-
- 5 dimethyl-1H-pyrazole-5-carboxamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-fluorobenzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-4-fluoro-3-(trifluoromethyl)benzamide;
- 10 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-5-methyl-2-phenyl-2H-1,2,3-triazole-4-carboxamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(4-methoxyphenoxy)-5-nitrobenzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-5-
- 15 nitro-2-furamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-phenoxyacetamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-quinoxaline-2-carboxamide;
- 20 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-(trifluoromethyl)benzamide;
- 2-(3-chlorophenoxy)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]-amino} cyclohexyl)acetamide;
- 3-(2,6-dichlorophenyl)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]-
- 25 amino} cyclohexyl)-5-methylisoxazole-4-carboxamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-phenoxy nicotinamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(4-

methylphenoxy)nicotinamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-(2-thienyl)-1,3-thiazole-4-carboxamide;

5 5-bromo-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)thiophene-2-carboxamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-(2,3,6-trichlorophenyl)acetamide;

2-(2-chloro-4-fluorophenyl)-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino})cyclohexyl)acetamide;

10 5-(4-chloro-2-nitrophenyl)-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino})cyclohexyl)-2-furamide;

5-chloro-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)thiophene-2-carboxamide;

15 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2,3-diphenylpropanamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-3-(2-hydroxyphenyl)propanamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-5-iodo-2-furamide;

20 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-(2-iodophenyl)acetamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-(5-methoxy-2-methyl-1H-indol-3-yl)acetamide;

25 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-3-oxoindane-1-carboxamide;

2-benzyl-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)benzamide;

2,2-bis(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}-



- amino} cyclohexyl)acetamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-5-(4-methyl-2-nitrophenyl)-2-furamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-5-nitrothiophene-2-carboxamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-methyl-4-nitrobenzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-methoxy-4-nitrobenzamide;
- 10 3-acetyl-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)benzamide;
- 5-bromo-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-furamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-[(4-methylpyrimidin-2-yl)thio]acetamide;
- 15 5-(4-chlorophenyl)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)-2-furamide;
- 2-(3,4-dichlorophenyl)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)acetamide;
- 20 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(4-hydroxy-3,5-dimethoxyphenyl)acetamide;
- 4,5-dibromo-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)thiophene-2-carboxamide;
- N<sup>2</sup>,N<sup>6</sup>-dibenzoyl-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)lysineamide;
- 25 3-(dimethylamino)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)benzamide;
- 4,5-dibromo-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-

- cyclohexyl)-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-4-(4-fluorophenyl)-4-oxobutanamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(2-fluorobiphenyl-4-yl)propanamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-[4-(1-oxo-1,3-dihydro-2H-indol-2-yl)phenyl]propanamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(1H-indol-3-yl)acetamide;
- 10 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(7-methoxy-2-oxo-2H-chromen-4-yl)acetamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(1H-indol-3-yl)-4-oxo-4-phenylbutanamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3,5-
- 15 dimethyl-2-[[{4-(trifluoromethoxy)phenyl]amino}carbonyl]amino]-benzamide;
- 3,5-dichloro-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-[(3-phenylprop-2-ynoyl)amino]benzamide;
- 4-(4-tert-butylphenyl)-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)-2-(7-ethyl-1H-indol-3-yl)-4-oxobutanamide;
- 20 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(1-methyl-1H-indol-3-yl)-4-(4-methylphenyl)-4-oxobutanamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-methyl-1-(3-morpholin-4-ylpropyl)-5-phenyl-1H-pyrrole-3-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-4-(4-
- 25 nitrophenyl)butanamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(3-phenoxyphenyl)acetamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(4-

phenoxyphenyl)acetamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-(2-phenyl-1H-indol-3-yl)acetamide;

N<sup>2</sup>-benzoyl-N<sup>5</sup>-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-  
5 cyclohexyl)-N<sup>1</sup>,N<sup>1</sup>-dipropylglutamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-3-phenoxybenzamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-(ethylthio)-2,2-diphenylacetamide;

10 N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-N,N-bis[(1S)-1-phenylethyl]phthalamide;

(2S)-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino} cyclohexyl)-2-(2-fluorobiphenyl-4-yl)propanamide;

2-[(4-chlorobenzyl)thio]-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}-  
15 amino} cyclohexyl)-4-(4-methylphenyl)-4-oxobutanamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-{{(1E)-5-fluoro-2-methyl-1-[4-(methylsulfinyl)benzylidene]-1H-inden-3-yl} acetamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-[4-(2-thienylcarbonyl)phenyl]propanamide;

20 3-(benzyloxy)-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-4-methoxybenzamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-methyl-1,5-diphenyl-1H-pyrrole-3-carboxamide;

1-{2-[(2-chloro-6-fluorobenzyl)thio]ethyl}-N-(cis-4-{{4-(dimethylamino)-5,6,7,8-  
25 tetrahydroquinazolin-2-yl}amino} cyclohexyl)-2-methyl-5-phenyl-1H-pyrrole-3-carboxamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-phenoxybenzamide;

N-(cis-4-{{4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl}amino}-cyclohexyl)-2-

- phenylquinoline-4-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-5-(3-nitrophenyl)-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-5-nitrothiophene-3-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-1-methyl-4-nitro-1H-pyrrole-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-2-methoxy-4-nitrobenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-2-methoxy-2-phenylacetamide;
- 5-chloro-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-hydroxybenzamide;
- 3-bromo-N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]benzamide;
- N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-methyl]-2-(ethylthio)nicotinamide;
- N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-methyl]-2-(4-methoxyphenyl)acetamide;
- N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-methyl]-5-methyl-2-(trifluoromethyl)-3-furamide;
- (2E)-N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-methyl]-3-(4-nitrophenyl)acrylamide;
- N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-methyl]-4-fluoro-3-methylbenzamide;
- N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-methyl]-2-(propylthio)nicotinamide;
- 2,6-dichloro-N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-

cyclohexyl)methyl]benzamide;

N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-methyl]-2,4,6-trimethylbenzamide;

2-chloro-N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-

5 cyclohexyl)methyl]-6-fluorobenzamide;

2,4,6-trichloro-N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]benzamide;

N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-methyl]-2-(2,3,6-trichlorophenyl)acetamide;

10 (2E)-N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)-methyl]-3-(3-nitrophenyl)acrylamide; and

N-[cis-4-(4-dimethylamino-5,6,7,8-tetrahydro-quinazolin-2-ylamino)-cyclohexylmethyl]-3,4-difluoro-benzamide;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

15 In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-methoxybenzamide;

3-bromo-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-

20 cyclohexyl)benzamide;

N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2,1,3-benzoxadiazole-5-carboxamide;

3-chloro-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)benzamide;

25 4-chloro-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)benzamide;

4-chloro-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-nitrobenzamide;

- 2-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]-amino}cyclohexyl})acetamide;
- 3-cyano-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})benzamide;
- 5 3,5-dichloro-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})benzamide;
- 3,4-dichloro-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})benzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-2,2-diphenylacetamide;
- 10 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-3,4-difluorobenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-3,5-difluorobenzamide;
- 15 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-4-fluorobenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-3-fluoro-5-(trifluoromethyl)benzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-4-methyl-3-nitrobenzamide;
- 20 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-3-nitrobenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-2-phenoxybutanamide;
- 25 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-2-phenoxypropanamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-3-methylbenzamide;

- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-3-iodobenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-2-(4-fluorophenyl)acetamide;
- 5 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-2,5-dimethyl-3-furamide;
- 3-chloro-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-4-fluorobenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-3,5-
- 10 dimethoxybenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-3,5-bis(trifluoromethyl)benzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-4-fluoro-3-methylbenzamide;
- 15 2,5-dichloro-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}thiophene-3-carboxamide;
- 5-bromo-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}nicotinamide;
- 2-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-
- 20 amino]-2-oxo-1-phenylethyl acetate;
- 3-(2-chloro-6-fluorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)-5-methylisoxazole-4-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-3-fluorobenzamide;
- 25 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-4-fluoro-3-(trifluoromethyl)benzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-2-(4-methoxyphenoxy)-5-nitrobenzamide;

- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-5-nitro-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-phenoxyacetamide;
- 5 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-quinoxaline-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-(trifluoromethyl)benzamide;
- 2-(3-chlorophenoxy)-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino})cyclohexyl)acetamide;
- 10 3-(2,6-dichlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino})cyclohexyl)-5-methylisoxazole-4-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(4-methylphenoxy)nicotinamide;
- 15 2-(2-chloro-4-fluorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino})cyclohexyl)acetamide;
- 5-(4-chloro-2-nitrophenyl)-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino})cyclohexyl)-2-furamide;
- 5-chloro-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)thiophene-2-carboxamide;
- 20 cyclohexyl)thiophene-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-5-iodo-2-furamide;
- 2,2-bis(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino})cyclohexyl)acetamide;
- 25 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-5-nitrothiophene-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-methyl-4-nitrobenzamide;



- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3-methoxy-4-nitrobenzamide;
- 3-acetyl-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)benzamide;
- 5 5-bromo-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-furamide;
- 5-(4-chlorophenyl)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)-2-furamide;
- 2-(3,4-dichlorophenyl)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)acetamide;
- 10 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(4-hydroxy-3,5-dimethoxyphenyl)acetamide;
- 4,5-dibromo-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-furamide;
- 15 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(1H-indol-3-yl)acetamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-(7-methoxy-2-oxo-2H-chromen-4-yl)acetamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-3,5-
- 20 dimethyl-2-[(4-(trifluoromethoxy)phenyl)amino]carbonylamino]-benzamide;
- 3,5-dichloro-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-[(3-phenylprop-2-ynoyl)amino]benzamide;
- 4-(tert-butylphenyl)-N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)-2-(7-ethyl-1H-indol-3-yl)-4-oxobutanamide;
- 25 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-2-methyl-1-(3-morpholin-4-ylpropyl)-5-phenyl-1H-pyrrole-3-carboxamide;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-4-(4-nitrophenyl)butanamide;

- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-2-(2-phenyl-1H-indol-3-yl)acetamide;
- N<sup>2</sup>-benzoyl-N<sup>2</sup>-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-N<sup>1</sup>,N<sup>1</sup>-dipropylglutamamide;
- 5 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-3-phenoxybenzamide;
- N'-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-N,N-bis[(1S)-1-phenylethyl]phthalamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-2-
- 10 ((1E)-5-fluoro-2-methyl-1-[4-(methylsulfinyl)benzylidene]-1H-inden-3-yl)acetamide;
- 3-(benzyloxy)-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-4-methoxybenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-2-phenoxybenzamide;
- 15 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-5-nitrothiophene-3-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-1-methyl-4-nitro-1H-pyrrole-2-carboxamide;
- 5-chloro-N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-
- 20 cyclohexyl})-2-hydroxybenzamide;
- N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-methyl]-2-(ethylthio)nicotinamide;
- N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-methyl]-2-(4-methoxyphenyl)acetamide;
- 25 N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-methyl]-5-methyl-2-(trifluoromethyl)-3-furamide;
- N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-methyl]-2-(propylthio)nicotinamide; and

2,4,6-trichloro-N-[(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl}]benzamide;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

- 5 (i) C<sub>1-5</sub> alkyl, and  
C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
- oxo,
  - C<sub>1-5</sub> alkoxy carbonyl,
  - 10 •carbocyclic aryl,
  - carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl,
  - 15 ••C<sub>2-5</sub> alkenyl, and
  - C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkylthio, and
  - heterocyclyl,
- (ii) C<sub>3-6</sub> cycloalkyl, and  
20 C<sub>3-6</sub> cycloalkyl substituted by carbocyclic aryl,
- (iii) carbocyclyl,
- (iv) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
- 25 •halogen,
  - cyano,
  - nitro,
  - C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•oxo, and

•carbocyclic aryl,

•C<sub>1-5</sub> alkoxy carbonyl,

•C<sub>1-7</sub> alkoxy,

•C<sub>1-7</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

•halogen, and

•carbocyclic aryl,

•C<sub>2-6</sub> cycloalkoxy,

•carbocyclic aryloxy,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino,

•C<sub>1-5</sub> alkylthio,

•C<sub>1-5</sub> alkylthio substituted by halogen, and

•carbocyclic aryl,

(v) heterocyclyl, and

heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy carbonyl

•C<sub>1-5</sub> alkoxy carbonyl substituted by carbocyclic aryl, and

•carbocyclic aryl;

L is Formula (VII);

Y is -C(O)NR<sub>3</sub>-;

wherein carbocyclic aryl is phenyl or naphthyl;

carbocyclyl is indanyl, adamantyl, or 9H-fluorenyl;

heterocyclyl is 2,3-dihydro-benzo[1,4]dioxinyl,

5 3,4-dihydro-2H-benzo[b][1,4]dioxepinyl, 4H-benzo[1,3]dioxinyl,  
benzo[1,3]dioxolyl, furyl, isoxazolyl, piperidyl, pyridyl, or thienyl;

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>2</sub> is methylamino or dimethylamino; p is 0;

10 R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single bond; B is a single bond or -CH<sub>2</sub>-; R<sub>5</sub> is hydrogen; or a  
pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-5</sub> alkyl, and

C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group  
15 consisting of:

•C<sub>1-5</sub> alkoxy carbonyl,

•carbocyclic aryl, and

•carbocyclic aryl substituted by halogen,

(ii) carbocyclic aryl, and

20 carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:

•halogen,

•nitro,

•C<sub>1-5</sub> alkyl,

25 •C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy, and

•C<sub>1-5</sub> alkoxy substituted by halogen,

(iii) heterocyclyl, and

heterocyclyl substituted by C<sub>1-3</sub> alkyl, and  
heterocyclyl substituted by carbocyclic aryl;  
wherein carbocyclic aryl is phenyl or naphthyl;  
heterocyclyl is isoxazolyl;  
5 halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

- 10 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-N'-(2-ethyl-6-methylphenyl)urea);
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-N'-(4-fluorophenyl)urea);
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-N'-mesitylurea);
- 15 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-N'-(2,4,6-trichlorophenyl)urea);
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-N'-(2,4,6-tribromophenyl)urea);
- N-(2,4-dibromo-6-fluorophenyl)-N'-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)urea);
- 20 N-(2,6-diethylphenyl)-N'-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)urea);
- N-(2-chlorobenzyl)-N'-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)urea);
- 25 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-N'-(2-ethyl-6-isopropylphenyl)urea);
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl}-N'-(2-ethylphenyl)urea);

- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-N'-(2-isopropyl-6-methylphenyl)urea;
- N-(2-tert-butyl-6-methylphenyl)-N'-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl})urea;
- 5 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-N'-(diphenylmethyl)urea;
- N-(4-bromo-2,6-dimethylphenyl)-N'-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl})urea;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-N'-(3-methyl-5-phenylisoxazol-4-yl)urea;
- 10 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-N'-1-naphthylurea;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-N'-(1-naphthyl)ethyl)urea;
- 15 N-(2,4-dibromophenyl)-N'-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl})urea;
- N-(2,4-dichlorobenzyl)-N'-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl})urea;
- N-(2,4-dimethoxyphenyl)-N'-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl})urea;
- 20 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-N'-(2-ethoxyphenyl)urea;
- N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-N'-(2-fluorobenzyl)urea;
- 25 N-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl})-N'-(3,4,5-trimethoxyphenyl)urea;
- N-(3,4-dimethoxyphenyl)-N'-(cis-4-{{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl})urea;

- N-(4-chloro-2-methylphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(4-fluorobenzyl)urea;
- 5 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(4-methoxy-2-methylphenyl)urea;
- N-(5-chloro-2,4-dimethoxyphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)urea;
- N-[1-(4-bromophenyl)ethyl]-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)urea;
- 10 N-(4-bromo-2-methylphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(5-methyl-3-phenylisoxazol-4-yl)urea;
- 15 N-(2,3-dichlorophenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(4-methylphenyl)urea;
- N-(2,6-diisopropylphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)urea;
- 20 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(2,4,5-trichlorophenyl)urea;
- N-(2,5-dimethoxyphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)urea;
- 25 N-(4-bromo-2-chlorophenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)-N'-(2-(trifluoromethoxy)phenyl)urea;



- N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]-N'-(2,6-dimethylphenyl)urea;
- N-(2,4-difluorophenyl)-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)methyl]urea;
- 5 N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]-N'-(2-ethyl-6-methylphenyl)urea;
- ethyl N-([[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]-amino}-cyclohexyl)methyl]amino} carbonyl)leucinate;
- N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]-N'-(4-fluorophenyl)urea;
- 10 N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]-N'-mesitylurea;
- N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]-N'-(2,4,6-trichlorophenyl)urea;
- 15 N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]-N'-(2,4,6-tribromophenyl)urea;
- N-(2,6-diethylphenyl)-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]-amino} cyclohexyl)methyl]urea;
- N-[2-chloro-6-(trifluoromethyl)phenyl]-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)methyl]urea;
- 20 N-(2-chloro-6-methylphenyl)-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)methyl]urea;
- N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]-N'-(2-ethyl-6-isopropylphenyl)urea;
- 25 N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)methyl]-N'-(2-isopropyl-6-methylphenyl)urea;
- N-(2-tert-butyl-6-methylphenyl)-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)methyl]urea;

N-(2-tert-butylphenyl)-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]-amino}cyclohexyl)methyl]urea;

N-(3-chloro-2-methylphenyl)-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)methyl]urea;

5 N-(4-bromo-2,6-dimethylphenyl)-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)methyl]urea;

N-(2,6-diisopropylphenyl)-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)methyl]urea;

10 N-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-methyl]-N'-(2,3-dimethyl-6-nitrophenyl)urea;

N-(2,6-dibromo-4-fluorophenyl)-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}cyclohexyl)methyl]urea;

N-(2,6-dichlorophenyl)-N'-[(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]-amino}cyclohexyl)methyl]urea; and

15 1-(2,3-dichloro-phenyl)-3-[cis-4-(4-dimethylamino-5,6,7,8-tetrahydro-quinazolin-2-ylamino)-cyclohexylmethyl]-urea;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

- (i) C<sub>1-8</sub> alkyl, and
- 20 C<sub>1-8</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
  - mono-C<sub>1-5</sub> alkylamino,
  - di-C<sub>1-5</sub> alkylamino,
  - C<sub>3-6</sub> cycloalkyl,
  - 25 •C<sub>3-6</sub> cycloalkenyl,
  - carbocyclic aryl,
  - carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

- halogen,
  - C<sub>1-3</sub> alkyl, and
  - C<sub>1-5</sub> alkoxy,
  - heterocyclyl,
- 5           (ii) C<sub>2-5</sub> alkynyl,
- (iii) C<sub>2-5</sub> alkenyl,
- (iv) C<sub>3-12</sub> cycloalkyl,
- (v) carbocyclyl,
- (vi) carbocyclic aryl, and
- 10           carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
- halogen,
  - cyano,
  - nitro,
- 15           •C<sub>1-10</sub> alkyl,
- C<sub>1-10</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
- halogen, and
  - oxo,
- 20           •carboxy,
- C<sub>1-5</sub> alkoxy carbonyl,
- C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:
- 25           ••halogen, and
- carbocyclic aryl,
- carbocyclic aryloxy,
- carbocyclic aryloxy substituted by nitro,

- mono- $C_{1-5}$  alkylamino,
  - di- $C_{1-5}$  alkylamino,
  - $C_{1-5}$  alkoxy carbonylamino,
  - carbocyclic aryl azo,
  - 5      •carbocyclic aryl azo substituted by substituent(s) independently selected from the group consisting of:
    - mono- $C_{1-5}$  alkylamino, and
    - di- $C_{1-5}$  alkylamino,
  - $C_{1-5}$  alkylthio,
  - 10      • $C_{1-5}$  alkylthio substituted by halogen,
  - carbocyclic arylthio,
  - carbocyclic arylthio substituted by nitro,
  - amino sulfonyl,
  - heterocyclyl sulfonyl,
  - 15      • $C_{3-6}$  cycloalkyl,
  - $C_{3-6}$  cycloalkyl substituted by  $C_{1-5}$  alkyl,
  - carbocyclic aryl, and
  - heterocyclyl,
  - (vii) heterocyclyl, and
  - 20      heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
    - $C_{1-5}$  alkyl,
    - $C_{1-5}$  alkoxy carbonyl,
    - carbocyclic aryloxy,
    - 25      •carbocyclic aryl, and
    - heterocyclyl;
- L is Formula (VII);  
 Y is  $-C(S)NR_5-$ ;

wherein carbocyclic aryl is phenyl or naphthyl;

carbocyclic aryl is indanyl, bicyclo[2.2.1]heptyl, bicyclo[2.2.1]heptenyl, or  
adamantly;

heterocyclic aryl is 2,3-dihydro-benzo[1,4]dioxinyl,

5 4,5,6,7-tetrahydro-benzo[b]thienyl, benzo[1,3]dioxolyl, benzo[2,1,3]thiadiazolyl,  
furyl, isoxazolyl, morpholinyl, oxazolyl, phenanthro[9,10-d]oxazolyl, piperidyl,  
pyrazolyl, pyridyl, tetrahydrofuryl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

10 In some embodiments of the present invention, R<sub>2</sub> is methylamino or dimethylamino; p is 0;  
R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single bond; B is a single bond or -CH<sub>2</sub>-; R<sub>5</sub> is hydrogen; or a  
pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-5</sub> alkyl, and

15 C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,

(ii) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:

•halogen,

20 •C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by halogen,

•mono-C<sub>1-5</sub> alkylamino, and

25 •di-C<sub>1-5</sub> alkylamino;

wherein carbocyclic aryl is phenyl or naphthyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

- N-(2,4-dimethoxyphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;
- 5 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(3,4,5-trimethoxyphenyl)thiourea;
- N-(3,4-dimethoxyphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;
- N-[4-(dimethylamino)-1-naphthyl]-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-
- 10 tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(2-methoxy-5-methylphenyl)thiourea;
- N-(4-bromo-2-chlorophenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;
- 15 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(4-iodophenyl)thiourea;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(2,4,6-tribromophenyl)thiourea;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-
- 20 (2,4,6-trichlorophenyl)thiourea;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-mesitylthiourea;
- N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(2,4-dimethylphenyl)thiourea;
- 25 N-(2,6-diethylphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;
- N-(4-bromo-2,6-dimethylphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;

N-(4-bromo-2-methylphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;

N-[4-bromo-2-(trifluoromethyl)phenyl]-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;

5 N-(4-chloro-2-methylphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;

N-[4-chloro-2-(trifluoromethyl)phenyl]-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;

10 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(4-fluoro-2-methylphenyl)thiourea;

N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(4-methoxy-2-methylphenyl)thiourea;

N-(5-chloro-2,4-dimethoxyphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;

15 N-(2,4-dibromo-6-fluorophenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;

N-(2,4-dichloro-6-methylphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;

20 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(2-ethoxyphenyl)thiourea;

N-[4-bromo-2-(trifluoromethoxy)phenyl]-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea;

N-(4-chloro-2,5-dimethoxyphenyl)-N'-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino} cyclohexyl)thiourea; and

25 N-(cis-4-{[4-(dimethylamino)-5,6,7,8-tetrahydroquinazolin-2-yl]amino}-cyclohexyl)-N'-(2,2-diphenylethyl)thiourea;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

- (i) C<sub>1-8</sub> alkyl, and  
C<sub>1-8</sub> alkyl substituted by substituent(s) independently selected from the group  
consisting of:  
•halogen,  
5 •C<sub>1-5</sub> alkoxy,  
•C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,  
•carbocyclyl,  
•carbocyclic aryl,  
•carbocyclic aryl substituted by substituent(s) independently selected from  
10 the group consisting of:  
••halogen,  
••nitro, and  
••C<sub>1-5</sub> alkoxy,
- (ii) C<sub>2-5</sub> alkenyl,  
15 (iii) carbocyclyl,  
(iv) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:  
•halogen,  
20 •C<sub>1-5</sub> alkyl,  
•C<sub>1-5</sub> alkyl substituted by halogen, and  
•C<sub>1-5</sub> alkoxy;  
L is Formula (VII);  
Y is -C(O)O-;  
25 wherein carbocyclic aryl is phenyl or naphthyl;  
carbocyclyl is 9H-fluorenyl or menthyl; and  
halogen is fluoro, chloro, bromo, or iodo;  
or a pharmaceutically acceptable salt, hydrate, or solvate thereof.



In some embodiments of the present invention, R<sub>2</sub> is methylamino or dimethylamino; p is 0; R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single bond; B is a single bond or -CH<sub>2</sub>-; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, Q is Formula (IV); p is 0;

5 R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-8</sub> alkyl, and

C<sub>1-8</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

10 •oxo,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

•C<sub>1-5</sub> alkylcarbonyloxy,

•carbocyclic aryloxy,

15 •carbocyclic aryloxy substituted by halogen,

•carbocyclic aryloxy substituted by nitro,

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,

•heterocyclyloxy,

•heterocyclyloxy substituted by C<sub>1-5</sub> alkyl,

20 •C<sub>1-5</sub> alkoxycarbonyl,

•mono-C<sub>1-5</sub> alkylaminocarbonyl,

•di-C<sub>1-5</sub> alkylaminocarbonyl,

•mono-C<sub>1-5</sub> alkylamino,

•mono-C<sub>1-5</sub> alkylamino substituted by cyano,

25 •mono-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,

•di-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino substituted by cyano,

•di-C<sub>1-5</sub> alkylamino substituted by carbocyclic aryl,

- mono-carbocyclic arylamino,
- mono-carbocyclic arylamino substituted by C<sub>1-5</sub> alkyl,
- di-carbocyclic arylamino,
- di-carbocyclic arylamino substituted by C<sub>1-5</sub> alkyl,
- 5   •C<sub>1-5</sub> alkoxycarbonylamino,
- carbocyclic arylcarbonylamino,
- C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by substituent(s) independently selected from the  
group consisting of:
  - 10           ••carbocyclic aryl,
  - carbocyclic aryl substituted by halogen, and
  - carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,
  - carbocyclic arylthio,
  - heterocyclylthio,
  - 15   •heterocyclylthio substituted by nitro,
  - heterocyclylthio substituted by C<sub>1-5</sub> alkyl,
  - C<sub>3-6</sub> cycloalkyl,
  - C<sub>3-6</sub> cycloalkenyl,
  - carbocyclyl,
  - 20   •carbocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
    - halogen,
    - C<sub>1-5</sub> alkyl,
    - C<sub>1-5</sub> alkoxy,
    - 25   ••C<sub>2-5</sub> alkenyl, and
    - C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected  
from the group consisting of:
      - carbocyclic aryl, and

\*\*\*carbocyclic aryl substituted by C<sub>1-5</sub> alkylsulfinyl,

\*carbocyclic aryl,

\*carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

5

\*\*halogen,

\*hydroxy,

\*\*nitro,

\*\*C<sub>1-5</sub> alkyl,

\*\*C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from

10

the group consisting of:

\*\*oxo,

\*\*\*carbocyclic aryl, and

\*\*\*heterocyclyl,

\*\*C<sub>2-5</sub> alkenyl,

15

\*\*C<sub>1-5</sub> alkoxy,

\*\*C<sub>1-5</sub> alkoxy substituted by halogen,

\*\*C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

\*\*carbocyclic aryloxy,

\*\*carbocyclic aryl, and

20

\*\*heterocyclyl,

\*heterocyclyl, and

\*heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

\*\*C<sub>1-5</sub> alkyl,

25

\*\*C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,

\*\*C<sub>1-5</sub> alkoxy,

\*\*C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

\*\*carbocyclic aryl, and

••carbocyclic aryl substituted by halogen,

(ii) C<sub>2-7</sub> alkenyl, and

C<sub>2-7</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••nitro, and

••C<sub>1-5</sub> alkoxy,

(iii) C<sub>2-5</sub> alkynyl, and

C<sub>2-5</sub> alkynyl substituted by carbocyclic aryl,

(iv) C<sub>3-6</sub> cycloalkyl, and

C<sub>3-6</sub> cycloalkyl substituted by substituent(s) independently selected from the group consisting of:

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by oxo,

•C<sub>1-5</sub> alkyl substituted by carbocyclic aryl, and

•carbocyclic aryl,

(v) carbocyclyl,

(vi) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•hydroxy,

•cyano,

•nitro,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••oxo,

••carbocyclic aryloxy,

••carbocyclic aryl, and

••carbocyclic aryl substituted by C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••carbocyclic aryl, and

••halogenated carbocyclic aryl,

•C<sub>2-5</sub> alkenyloxy,

•C<sub>3-6</sub> cycloalkoxy,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxycarbonyl,

•mono-C<sub>1-5</sub> alkylaminocarbonyl,

•di-C<sub>1-5</sub> alkylaminocarbonyl,

•mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,

•di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,

•amino,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino,

•mono-C<sub>1-5</sub> alkylamino substituted by cyano,

•di-C<sub>1-5</sub> alkylamino substituted by cyano,

•C<sub>2-5</sub> alkynylcarbonylamino,

- C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,
- (carbocyclic aryl)NHC(O)NH,
- (carbocyclic aryl)NHC(O)NH substituted by C<sub>1-5</sub> alkoxy,
- (carbocyclic aryl)NHC(O)NH substituted by halogenated C<sub>1-5</sub> alkoxy,
- 5     •C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by halogen,
- carbocyclic arylthio,
- carbocyclic arylthio substituted by cyano,
- 10     •mono-C<sub>1-5</sub> alkylaminosulfonyl,
- di-C<sub>1-5</sub> alkylaminosulfonyl,
- carbocyclic aryl,
- heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the
- group consisting of:
- 15             ••C<sub>1-5</sub> alkyl,
- carbocyclic aryl, and
- halogenated carbocyclic aryl,
- (vii) heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the
- 20     group consisting of:
- halogen,
- nitro,
- C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the
- 25     group consisting of:
- halogen,
- hydroxy,
- C<sub>1-5</sub> alkylthio,

- C<sub>1-5</sub> alkylthio substituted by carbocyclic aryl,
- C<sub>1-5</sub> alkylthio substituted by halogenated carbocyclic aryl,
- carbocyclic aryl,
- carbocyclic aryl substituted by halogen, and
- 5       ••heterocyclyl,
- C<sub>1-5</sub> alkoxy,
- carbocyclic aryloxy,
- carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkylthio,
- 10       •C<sub>2-5</sub> alkenylthio,
- carbocyclic arylthio,
- carbocyclic arylthio substituted by C<sub>1-5</sub> alkoxycarbonyl,
- C<sub>1-5</sub> alkylsulfonyl,
- carbocyclic arylsulfonyl,
- 15       •carbocyclic arylsulfonyl substituted by C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkoxycarbonyl,
- carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:
- 20       ••halogen,
- nitro,
- C<sub>1-5</sub> alkyl, and
- C<sub>1-5</sub> alkyl substituted by halogen,
- heterocyclyl;
- 25       wherein carbocyclic aryl is phenyl, naphthyl, or anthranlyl;  
carbocyclyl is 1,2,3,4-tetrahydronaphthyl, 1-oxo-indanyl, 9-fluorenyl,  
9-oxo-9H-fluorenyl, bicyclo[2.2.1]heptyl, indenyl, or menthyl;  
heterocyclyl is 1,2,3-triazolyl, 1H-indolyl, 1H-pyrrolyl,

2,3-dihydro-1-oxo-isoindolyl, 2,3-dihydro-benzo[1,4]dioxinyl,  
 2,3-dihydro-benzofuryl, 2,4-dihydro-3-oxo-pyrazolyl, 2*H*-benzopyranyl,  
 2-oxo-benzopyranyl, 3,4-dihydro-2*H*-benzo[b][1,4]dioxepinyl,  
 4-oxo-1,5,6,7-tetrahydro-indolyl, 4-oxo-benzopyranyl, 9*H*-carbazolyl, 9*H*-xanthenyl,  
 5 benzo[1,3]dioxolyl, benzo[2,1,3]oxadiazolyl, benzo[1,2,5]oxadiazolyl,  
 benzo[b]thienyl, benzofuryl, benzothiazolyl, furyl, imidazo[2,1-*b*]thiazolyl,  
 imidazolyl, isoxazolyl, morpholino, pyrazolyl, pyridyl, pyrimidyl, quinolyl,  
 quinoxalyl, thiazolyl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;  
 10 or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

- (i) C<sub>1-7</sub> alkyl, and  
 C<sub>1-7</sub> alkyl substituted by substituent(s) independently selected from the group  
 consisting of:  
 15 •C<sub>1-5</sub> alkoxy,  
 •C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,  
 •carbocyclic aryloxy,  
 •carbocyclic aryloxy substituted by halogen,  
 •mono-C<sub>1-5</sub> alkylamino,  
 20 •mono-C<sub>1-5</sub> alkylamino substituted by substituent(s) independently selected  
 from the group consisting of:  
 ••cyano, and  
 ••carbocyclic aryl,  
 •di-C<sub>1-5</sub> alkylamino,  
 25 •di-C<sub>1-5</sub> alkylamino substituted by substituent(s) independently selected from  
 the group consisting of:  
 ••cyano, and  
 ••carbocyclic aryl,



- mono-carbocyclic arylamino,
- di-carbocyclic arylamino,
- mono-carbocyclic arylamino substituted by C<sub>1-5</sub> alkyl,
- di-carbocyclic arylamino substituted by C<sub>1-5</sub> alkyl,
- 5      •carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl, and
  - 10      ••C<sub>1-5</sub> alkoxy,
- (ii)    C<sub>2-7</sub> alkenyl, and  
C<sub>2-7</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:
  - carbocyclic aryl, and
  - 15      •carbocyclic aryl substituted by C<sub>1-5</sub> alkoxy,
- (iii)   C<sub>2-5</sub> alkynyl, and  
C<sub>2-5</sub> alkynyl substituted by carbocyclic aryl,
- (iv)    carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - hydroxy,
  - cyano,
  - C<sub>1-5</sub> alkyl,
  - 25      •C<sub>1-5</sub> alkyl substituted by halogen,
  - C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

- halogen,
- carbocyclic aryl, and
- carbocyclic aryl substituted by halogen,
- C<sub>2-5</sub> alkenyloxy,
- 5 •mono-C<sub>1-5</sub> alkylamino,
- di-C<sub>1-5</sub> alkylamino,
- mono-C<sub>1-5</sub> alkylamino substituted by cyano,
- di-C<sub>1-5</sub> alkylamino substituted by cyano,
- C<sub>1-5</sub> alkylthio, and
- 10 •C<sub>1-5</sub> alkylthio substituted by halogen,
- (v) heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the
- group consisting of:
- halogen,
- 15 •C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkyl substituted by hydroxy,
- C<sub>1-5</sub> alkoxy,
- carbocyclic arylthio,
- carbocyclic arylthio substituted by C<sub>1-5</sub> alkoxycarbonyl,
- 20 •C<sub>1-5</sub> alkoxycarbonyl,
- carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from
- the group consisting of:
- halogen,
- 25 ••C<sub>1-5</sub> alkyl, and
- C<sub>1-5</sub> alkyl substituted by halogen;

L is Formula (VII);

Y is a single bond or -CH<sub>2</sub>-;

wherein carbocyclic aryl is phenyl or naphthyl;

heterocyclyl is 1*H*-indolyl, 1*H*-pyrrolyl, 2,3-dihydro-benzo[1,4]dioxinyl,

4-oxo-benzopyranyl, 9*H*-carbazolyl, benzo[1,3]dioxolyl, benzo[b]thienyl, furyl,

imidazo[2,1-*b*]thiazolyl, pyrazolyl, pyridyl, or thienyl; and

5 halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>2</sub> is methylamino, or dimethylamino; p is 0;

R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single bond; B is a single bond or -CH<sub>2</sub>-; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

10 In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>2-5</sub> alkenyl, and

C<sub>2-5</sub> alkenyl substituted by carbocyclic aryl,

(ii) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the  
15 group consisting of:

•halogen,

•hydroxy,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkoxy,

20 •C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the  
group consisting of:

••halogen,

••carbocyclic aryl, and

••carbocyclic aryl substituted by halogen,

25 •C<sub>2-5</sub> alkenyloxy,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino,

•mono-C<sub>1-5</sub> alkylamino substituted by cyano, and

- di-C<sub>1-5</sub> alkylamino substituted by cyano,
- (iii) heterocyclyl, and  
heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
- halogen,
- C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkoxycarbonyl,
- carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:
- halogen,
- C<sub>1-5</sub> alkyl, and
- C<sub>1-5</sub> alkyl substituted by halogen;
- wherein carbocyclic aryl is phenyl or naphthyl;  
heterocyclyl is 1*H*-indolyl, 9*H*-carbazolyl, benzo[1,3]dioxolyl, pyrazolyl, or  
pyridyl; and  
halogen is fluoro, chloro, bromo, or iodo;  
or a pharmaceutically acceptable salt, hydrate, or solvate thereof.
- In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:
- (i) C<sub>2-5</sub> alkenyl, and  
C<sub>2-5</sub> alkenyl substituted by carbocyclic aryl,
- (ii) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:
- halogen,
- hydroxy,
- C<sub>1-5</sub> alkyl,

- C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkoxy substituted by halogen,
- C<sub>2-5</sub> alkenyloxy,
- (iii) heterocyclyl, and
- 5 heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkoxy,
  - 10 •C<sub>1-5</sub> alkoxycarbonyl,
  - carbocyclic aryl,
  - carbocyclic aryl substituted by C<sub>1-5</sub> alkyl, and
  - carbocyclic aryl substituted by halogenated C<sub>1-5</sub> alkyl;
  - wherein carbocyclic aryl is phenyl or naphthyl;
  - 15 heterocyclyl is 1*H*-indolyl, 9*H*-carbazolyl, benzo[1,3]dioxolyl, or pyrazolyl; and
  - halogen is fluoro, chloro, bromo, or iodo;
  - or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

- In some embodiments, compounds of the present invention are of Formula (I) wherein the
- 20 compound is selected from the group consisting of:
- N<sup>2</sup>-(cis-4-{[(5-bromo-1*H*-indol-3-yl)methyl]amino} cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethylpyrimidine-2,4-diamine;
- N<sup>2</sup>-(cis-4-{[5-(4-fluorophenyl)pyridin-3-yl]methyl} amino)cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethylpyrimidine-2,4-diamine;
- 25 ethyl 4,6-dichloro-3-{[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-amino]methyl}-1*H*-indole-2-carboxylate;
- N<sup>2</sup>-(cis-4-{[(2,6-dimethoxybenzyl)amino]methyl} cyclohexyl)-N<sup>4</sup>,N<sup>4</sup>-dimethylpyrimidine-2,4-diamine;

- $N^2$ -(cis-4-(((2-ethoxybenzyl)amino)methyl)cyclohexyl)- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -(cis-4-(((4-methoxy-1-naphthyl)methyl)amino)methyl)cyclohexyl]- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;
- 5  $N^2$ -(cis-4-(((5-methoxy-1H-indol-3-yl)methyl)amino)methyl)cyclohexyl]- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -(cis-4-(((2-methoxy-1-naphthyl)methyl)amino)methyl)cyclohexyl]- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;
- 4-bromo-2-(((cis-4-([4-(dimethylamino)pyrimidin-2-yl]amino)-cyclohexyl)methyl)-
- 10 amino)methyl)-6-methoxyphenol;
- $N^2$ -(cis-4-(((5-bromo-1H-indol-3-yl)methyl)amino)methyl)cyclohexyl]- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -(cis-4-(((2,4-dimethoxybenzyl)amino)methyl)cyclohexyl)- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;
- 15  $N^4,N^4$ -dimethyl- $N^2$ -(cis-4-(((2,3,4-trimethoxybenzyl)amino)methyl)-cyclohexyl)pyrimidine-2,4-diamine;
- $N^2$ -(cis-4-(((3-ethoxy-4-methoxybenzyl)amino)methyl)cyclohexyl)- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^4,N^4$ -dimethyl- $N^2$ -(cis-4-(((3-[4-(trifluoromethyl)phenyl]-1H-pyrazol-4-yl)methyl)-
- 20 amino)methyl)cyclohexyl)pyrimidine-2,4-diamine;
- $N^4,N^4$ -dimethyl- $N^2$ -(cis-4-(((3,4,5-trimethoxybenzyl)amino)methyl)-cyclohexyl)pyrimidine-2,4-diamine;
- 4-(((cis-4-([4-(dimethylamino)pyrimidin-2-yl]amino)cyclohexyl)-methyl)amino)methyl)-2-iodo-6-methoxyphenol;
- 25 4-(((cis-4-([4-(dimethylamino)pyrimidin-2-yl]amino)cyclohexyl)methyl)-amino)methyl)-2,6-dimethylphenol;
- $N^2$ -(cis-4-(((5-bromo-2,4-dimethoxybenzyl)amino)methyl)cyclohexyl)- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;

- $N^2$ -(cis-4-{{(5-bromo-2-methoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -[cis-4-{{[4-(diethylamino)benzyl]amino}methyl}cyclohexyl]- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- 5  $N^2$ -[cis-4-{{(9-ethyl-9H-carbazol-3-yl)methyl}amino}methyl}cyclohexyl]- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -(cis-4-{{(4-isopropoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -(cis-4-{{[3,3-diphenylprop-2-en-1-yl]amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- 10  $N^2$ -(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl}methyl)-amino)methyl)-2-ethoxyphenol;
- $N^2$ -(cis-4-{{[4-(dimethylamino)-1-naphthyl]methyl}amino)methyl}-cyclohexyl)- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- 15  $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-{{(2,4,6-trimethoxybenzyl)amino}methyl}-cyclohexyl)pyrimidine-2,4-diamine;
- $N^2$ -(cis-4-{{(5-bromo-2-ethoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -(cis-4-{{(2,4-dimethoxy-3-methylbenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- 20  $N^2$ -(cis-4-{{[2,5-diethoxybenzyl]amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -(cis-4-{{(2,4-diethoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- 25  $N^2$ -(cis-4-{{(3,5-dibromo-2-methoxybenzyl)amino}methyl}cyclohexyl)- $N^4$ , $N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^4$ , $N^4$ -dimethyl- $N^2$ -(cis-4-{{(2,4,5-triethoxybenzyl)amino}methyl}-cyclohexyl)pyrimidine-2,4-diamine;

- $N^4, N^4$ -dimethyl- $N^2$ -( $cis$ -4- $\{[(2,4,5\text{-trimethoxybenzyl})\text{amino}]\text{methyl}\}$ -cyclohexyl)pyrimidine-2,4-diamine;
- $N^2$ -[ $cis$ -4- $\{[2\text{-}(\text{allyloxy})\text{benzyl}]\text{amino}\}$ methyl]cyclohexyl]- $N^4, N^4$ -dimethylpyrimidine-2,4-diamine;
- 5  $N^4, N^4$ -dimethyl- $N^2$ -[ $cis$ -4- $\{[(1\text{-methyl-1H-indol-3-yl})\text{methyl}]\text{amino}\}$ -methyl]cyclohexyl]-pyrimidine-2,4-diamine;
- $N^2$ -[ $cis$ -4- $\{[(7\text{-methoxy-1,3-benzodioxol-5-yl})\text{methyl}]\text{amino}\}$ methyl]-cyclohexyl]- $N^4, N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -( $cis$ -4- $\{[(3\text{-bromo-4,5-dimethoxybenzyl})\text{amino}]\text{methyl}\}$ cyclohexyl]- $N^4, N^4$ -dimethylpyrimidine-2,4-diamine;
- 10  $N^2$ -( $cis$ -4- $\{[(4\text{-methoxy-3-methylbenzyl})\text{amino}]\text{methyl}\}$ cyclohexyl]- $N^4, N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -( $cis$ -4- $\{[(2\text{-bromo-4,5-dimethoxybenzyl})\text{amino}]\text{methyl}\}$ cyclohexyl]- $N^4, N^4$ -dimethylpyrimidine-2,4-diamine;
- 15  $N^2$ -( $cis$ -4- $\{[(3,4\text{-dimethoxybenzyl})\text{amino}]\text{methyl}\}$ cyclohexyl]- $N^4, N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -( $cis$ -4- $\{[(4\text{-methoxy-2,5-dimethylbenzyl})\text{amino}]\text{methyl}\}$ cyclohexyl]- $N^4, N^4$ -dimethylpyrimidine-2,4-diamine;
- 3-[[4- $\{[(cis$ -4- $\{[4\text{-}(\text{dimethylamino})\text{pyrimidin-2-yl}]\text{amino}\}$ cyclohexyl]-methyl}amino]-methyl]phenyl](methyl)amino]propanenitrile;
- 20  $N^2$ -{ $cis$ -4-[[4-[(4-bromobenzyl)oxy]benzyl]amino]methyl]cyclohexyl]- $N^4, N^4$ -dimethylpyrimidine-2,4-diamine;
- $N^2$ -( $cis$ -4- $\{[(3,5\text{-dibromo-2-ethoxybenzyl})\text{amino}]\text{methyl}\}$ cyclohexyl]- $N^4, N^4$ -dimethylpyrimidine-2,4-diamine;
- 25  $N^2$ -[4-(4-bromo-2-trifluoromethoxy-benzyl)amino-cyclohexyl]- $N^4, N^4$ -dimethyl-pyrimidine-2,4-diamine;
- $N^2$ -{ $cis$ -4-[2-(4-bromo-2-trifluoromethoxy-phenyl)-ethylamino]-cyclohexyl]- $N^4, N^4$ -dimethyl-pyrimidine-2,4-diamine; and



$N^2$ -{cis-4-[(4-bromo-2-trifluoromethoxy-benzyl)amino-methyl]-cyclohexyl}- $N^4,N^4$ -dimethyl-pyrimidine-2,4-diamine;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the  
5 compound is selected from the group consisting of:

ethyl 4,6-dichloro-3-{[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-amino]methyl}-1H-indole-2-carboxylate;

$N^2$ -[cis-4-{[(4-methoxy-1-naphthyl)methyl]amino)methyl}cyclohexyl]- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;

10  $N^2$ -[cis-4-{[(2-methoxy-1-naphthyl)methyl]amino)methyl}cyclohexyl]- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;

4-bromo-2-({[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]-amino)methyl}-6-methoxyphenol;

$N^2$ -[cis-4-{[(5-bromo-1H-indol-3-yl)methyl]amino)methyl}cyclohexyl]- $N^4,N^4$ -

15 dimethylpyrimidine-2,4-diamine;

$N^4,N^4$ -dimethyl- $N^2$ -(cis-4-{[(2,3,4-trimethoxybenzyl)amino]methyl}-cyclohexyl)pyrimidine-2,4-diamine;

$N^2$ -(cis-4-{[(3-ethoxy-4-methoxybenzyl)amino]methyl}cyclohexyl)- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;

20  $N^4,N^4$ -dimethyl- $N^2$ -(cis-4-{{{[3-[4-(trifluoromethyl)phenyl]-1H-pyrazol-4-yl]methyl}-amino]methyl}cyclohexyl)pyrimidine-2,4-diamine;

4-({[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-amino)methyl}-2-iodo-6-methoxyphenol;

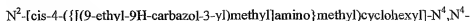
4-({[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-amino)methyl}-

25 2,6-dimethylphenol;

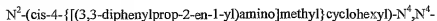
$N^2$ -(cis-4-{[(5-bromo-2,4-dimethoxybenzyl)amino]methyl}cyclohexyl)- $N^4,N^4$ -dimethylpyrimidine-2,4-diamine;

$N^2$ -(cis-4-{[(5-bromo-2-methoxybenzyl)amino]methyl}cyclohexyl)- $N^4,N^4$ -

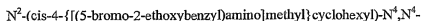
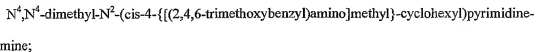
dimethylpyrimidine-2,4-diamine;



dimethylpyrimidine-2,4-diamine;



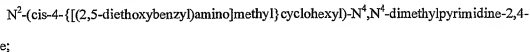
5 dimethylpyrimidine-2,4-diamine;



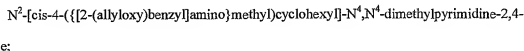
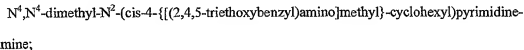
dimethylpyrimidine-2,4-diamine;

10  $N^2\text{-[cis-4-}\{[(2,4\text{-dimethoxy-3-methylbenzyl)amino]methyl\}cyclohexyl\text{-}N^4,N^4\text{-}$

dimethylpyrimidine-2,4-diamine;

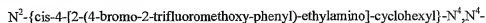
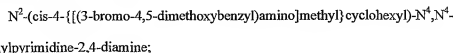


15 dimethylpyrimidine-2,4-diamine;

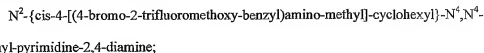


20  $N^2\text{-[cis-4-}\{[(7\text{-methoxy-1,3-benzodioxol-5-yl)methyl]amino\}methyl\}-cyclohexyl\text{-}N^4,N^4\text{-}$

dimethylpyrimidine-2,4-diamine;



25 dimethylpyrimidine-2,4-diamine; and



or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-5</sub> alkyl, and

C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

5

•oxo,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

•C<sub>1-5</sub> alkylcarbonyloxy,

•carbocyclic aryloxy,

10

•carbocyclic aryloxy substituted by halogen,

•carbocyclic aryloxy substituted by nitro,

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,

•heterocyclyloxy,

•heterocyclyloxy substituted by C<sub>1-5</sub> alkyl,

15

•mono-C<sub>1-5</sub> alkylaminocarbonyl,

•di-C<sub>1-5</sub> alkylaminocarbonyl,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino,

•mono-carbocyclic arylamino,

20

•di-carbocyclic arylamino,

•mono-carbocyclic arylamino substituted by halogen,

•di-carbocyclic arylamino substituted by halogen,

•carbocyclic arylcarbonylamino,

•C<sub>1-5</sub> alkoxycarbonylamino,

25

•C<sub>1-5</sub> alkylthio,

•C<sub>1-5</sub> alkylthio substituted by substituent(s) independently selected from the group consisting of:

••carbocyclic aryl, and

••carbocyclic aryl substituted by substituent(s) independently  
selected from the group consisting of:

•••halogen, and

•••C<sub>1-5</sub> alkoxy,

5

•carbocyclic arylthio,

•heterocyclylthio,

•heterocyclylthio substituted by C<sub>1-5</sub> alkyl,

•heterocyclylthio substituted by nitro,

•C<sub>3-6</sub> cycloalkyl,

10

•C<sub>3-6</sub> cycloalkenyl,

•carbocyclyl,

•carbocyclyl substituted by substituent(s) independently selected from the  
group consisting of:

••halogen,

15

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkoxy,

••C<sub>2-5</sub> alkenyl, and

••C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected  
from the group consisting of:

20

•••carbocyclic aryl, and

•••carbocyclic aryl substituted by C<sub>1-5</sub> alkylsulfinyl,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:

25

••halogen,

••hydroxy,

••nitro,

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•••O<sub>2</sub>C,

•••carbocyclic aryl, and

5                   •••heterocyclyl,

••C<sub>1-5</sub> alkoxy,

••C<sub>1-5</sub> alkoxy substituted by halogen,

••C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

••carbocyclic aryloxy,

10                  ••carbocyclic aryl, and

••heterocyclyl,

•heterocyclyl, and

•heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

15                  ••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,

••C<sub>1-5</sub> alkoxy,

••C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,

••carbocyclic aryl, and

20                  ••carbocyclic aryl substituted by halogen,

(ii) C<sub>2-5</sub> alkenyl, and

C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl,

25                  •carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen, and

••nitro,

- (iii) C<sub>3-6</sub> cycloalkyl, and  
C<sub>3-6</sub> cycloalkyl substituted by substituent(s) independently selected from the  
group consisting of:  
•C<sub>1-5</sub> alkyl,  
5 •C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the  
group consisting of:  
••oxo, and  
••carbocyclic aryl, and  
•carbocyclic aryl,  
10 (iv) carbocyclyl,  
(v) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:  
•halogen,  
15 •hydroxy,  
•cyano,  
•nitro,  
•C<sub>1-5</sub> alkyl,  
•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the  
20 group consisting of:  
••halogen,  
••oxo,  
••carbocyclic aryloxy,  
••carbocyclic aryl, and  
25 ••carbocyclic aryl substituted by C<sub>1-5</sub> alkyl,  
•C<sub>1-5</sub> alkoxy,  
•C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the  
group consisting of:

- halogen, and
- carbocyclic aryl,
- carbocyclic aryloxy,
- carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
- 5 •mono-C<sub>1-5</sub> alkylaminocarbonyl,
- di-C<sub>1-5</sub> alkylaminocarbonyl,
- mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
- di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
- amino,
- 10 •mono-C<sub>1-5</sub> alkylamino,
- di-C<sub>1-5</sub> alkylamino,
- C<sub>2-5</sub> alkynylcarbonylamino,
- C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,
- (carbocyclic aryl)NHC(O)NH,
- 15 •(carbocyclic aryl)NHC(O)NH substituted by C<sub>1-5</sub> alkoxy,
- (carbocyclic aryl)NHC(O)NH substituted by halogenated C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylthio substituted by halogen,
- carbocyclic arylthio,
- 20 •carbocyclic arylthio substituted by cyano,
- mono-C<sub>1-5</sub> alkylaminosulfonyl,
- di-C<sub>1-5</sub> alkylaminosulfonyl, and
- carbocyclic aryl,
- carbocyclic aryl substituted by halogen,
- 25 •heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
- C<sub>1-5</sub> alkyl,

- carbocyclic aryl, and

- halogenated carbocyclic aryl,

(vi) heterocyclyl, and

heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

- halogen,

- nitro,

- C<sub>1-5</sub> alkyl,

- C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

- halogen,

- C<sub>1-5</sub> alkylthio,

- C<sub>1-5</sub> alkylthio substituted by carbocyclic aryl,

- C<sub>1-5</sub> alkylthio substituted by halogenated carbocyclic aryl,

- carbocyclic aryl,

- carbocyclic aryl substituted by halogen, and

- heterocyclyl,

- C<sub>1-5</sub> alkoxy,

- carbocyclic aryloxy,

- carbocyclic aryloxy substituted by halogen,

- carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,

- C<sub>1-5</sub> alkylthio,

- C<sub>2-5</sub> alkenylthio,

- carbocyclic arylthio,

- C<sub>1-5</sub> alkylsulfonyl,

- carbocyclic arylsulfonyl,

- carbocyclic arylsulfonyl substituted by C<sub>1-5</sub> alkyl,

- carbocyclic aryl,



•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•nitro, and

5                   •C<sub>1-5</sub> alkyl,

•heterocyclyl;

L is Formula (VII);

Y is -C(O)-;

wherein carbocyclic aryl is phenyl, naphthyl, or anthranyl;

10                   carbocyclyl is 1,2,3,4-tetrahydronaphthyl, 1-oxo-indanyl,

9-oxo-9H-fluorenyl, or indenyl;

heterocyclyl is 1,2,3-triazolyl, 1H-indolyl, 1H-pyrrolyl,

2,3-dihydro-1-oxo-isindolyl, 2,3-dihydro-benzofuryl, 2,4-dihydro-3-oxo-pyrazolyl,

2H-benzopyranyl, 2-oxo-benzopyranyl, 4-oxo-1,5,6,7-tetrahydro-indolyl,

15                   9H-xanthenyl, benzo[1,3]dioxolyl, benzo[2,1,3]oxadiazolyl,

benzo[1,2,5]oxadiazolyl, benzo[b]thienyl, benzofuryl, benzothiazolyl, furyl,

imidazolyl, isoxazolyl, morpholino, pyrazolyl, pyridyl, pyrimidyl, quinolyl,

quinoxalyl, thiazolyl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;

20                   or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>2</sub> is hydrogen, trifluoromethyl, methoxy, methylamino, dimethylamino, ethylamino, ethylmethylamino, or hydroxylethylmethylamino; p is 0; R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single bond; B is a single bond or -CH<sub>2</sub>-; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

25                   In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-5</sub> alkyl, and

C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

- oxo,
- °carbocyclic aryloxy,
- °carbocyclic aryloxy substituted by halogen,
- °carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
- 5     °mono-C<sub>1-5</sub> alkylaminocarbonyl,
- °di-C<sub>1-5</sub> alkylaminocarbonyl,
- °mono-C<sub>1-5</sub> alkylamino,
- °di-C<sub>1-5</sub> alkylamino,
- °mono-carbocyclic arylamino,
- 10     °di-carbocyclic arylamino,
- °mono-carbocyclic arylamino substituted by halogen,
- °di-carbocyclic arylamino substituted by halogen,
- °carbocyclic arylcarbonylamino,
- °C<sub>1-5</sub> alkylthio,
- 15     °C<sub>3-6</sub> cycloalkyl,
- °carbocyclyl,
- °carbocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>2-5</sub> alkenyl, and
  - C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected  
from the group consisting of:
    - \*\*\*carbocyclic aryl, and
    - \*\*\*carbocyclic aryl substituted by C<sub>1-5</sub> alkylsulfinyl,
- 25     °carbocyclic aryl,
- °carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:

- halogen,
- hydroxy,
- nitro,
- C<sub>1-5</sub> alkyl,
- 5      ••C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
  - oxo,
  - carbocyclic aryl, and
  - heterocyclyl,
- 10      ••C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkoxy substituted by halogen,
- heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
- 15      ••C<sub>1-5</sub> alkyl,
- carbocyclic aryl, and
- carbocyclic aryl substituted by halogen,
- (ii)    C<sub>2-5</sub> alkenyl, and
- C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:
- 20      •carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
  - halogen, and
  - 25      ••nitro,
- (iii)   carbocyclyl,
- (iv)    carbocyclic aryl, and
- carbocyclic aryl substituted by substituent(s) independently selected from the

group consisting of:

•halogen,

•hydroxy,

•nitro,

5

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••oxo, and

10

••carbocyclic aryl,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

••halogen, and

15

••carbocyclic aryl,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,

•mono-C<sub>1-5</sub> alkylaminocarbonyl,

•di-C<sub>1-5</sub> alkylaminocarbonyl,

20

•mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,

•di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino,

•C<sub>2-5</sub> alkynylcarbonylamino,

25

•C<sub>2-5</sub> alkynylcarbonylamino substituted by carbocyclic aryl,

•mono-C<sub>1-5</sub> alkylaminosulfonyl, and

•di-C<sub>1-5</sub> alkylaminosulfonyl,

(v) heterocyclyl, and

heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•nitro,

5       •C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

••C<sub>1-5</sub> alkylthio,

••C<sub>1-5</sub> alkylthio substituted by carbocyclic aryl,

10       ••C<sub>1-5</sub> alkylthio substituted by halogenated carbocyclic aryl,

••carbocyclic aryl,

••carbocyclic aryl substituted by halogen, and

••heterocyclyl,

•carbocyclic aryloxy,

15       •carbocyclic aryloxy substituted by halogen,

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkylthio,

•C<sub>1-5</sub> alkylsulfonyl,

•carbocyclic arylsulfonyl,

20       •carbocyclic arylsulfonyl substituted by C<sub>1-5</sub> alkyl,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

25       ••nitro, and

••C<sub>1-5</sub> alkyl,

•heterocyclyl;

wherein carbocyclic aryl is phenyl or naphthyl;

carbocyclyl is 1-oxo-indanyl, 9-oxo-9*H*-fluorenyl, or indenyl;

heterocyclyl is 1,2,3-triazolyl, 1*H*-indolyl, 1*H*-pyrrolyl,

2,3-dihydro-benzofuryl, 2*H*-benzopyranyl, 9*H*-xanthenyl, benzo[2,1,3]oxadiazolyl,  
benzo[1,2,5]oxadiazolyl, benzo[b]thienyl, furyl, isoxazolyl, morpholino, pyrazolyl,  
pyridyl, quinolyl, quinoxalyl, thiazolyl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-5</sub> alkyl, and

C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group  
consisting of:

•oxo,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by halogen,

•carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,

•mono-C<sub>1-5</sub> alkylamino,

•di-C<sub>1-5</sub> alkylamino,

•mono-carbocyclic arylamino,

•di-carbocyclic arylamino,

•mono-carbocyclic arylamino substituted by halogen,

•di-carbocyclic arylamino substituted by halogen,

•C<sub>1-5</sub> alkylthio,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:

••halogen,

••hydroxy,

••C<sub>1-5</sub> alkyl,

- C<sub>1-5</sub> alkoxy, and
- C<sub>1-5</sub> alkoxy substituted by halogen,
- heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the
- 5 group consisting of:
  - C<sub>1-5</sub> alkyl,
  - carbocyclic aryl, and
  - carbocyclic aryl substituted by halogen,
- (ii) C<sub>2-5</sub> alkenyl, and
- 10 C<sub>2-5</sub> alkenyl substituted by substituent(s) independently selected from the group consisting of:
  - carbocyclic aryl,
  - carbocyclic aryl substituted by nitro,
- (iii) carbocyclyl,
- 15 (iv) carbocyclic aryl, and
- carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - hydroxy,
  - 20 •nitro,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by halogen,
  - C<sub>1-5</sub> alkoxy,
  - C<sub>1-5</sub> alkoxy substituted by halogen,
  - 25 •C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,
  - carbocyclic aryloxy,
  - carbocyclic aryloxy substituted by C<sub>1-5</sub> alkoxy,
  - mono-C<sub>1-5</sub> alkylaminocarbonyl,

- di-C<sub>1-5</sub> alkylaminocarbonyl,
  - mono-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
  - di-C<sub>1-5</sub> alkylaminocarbonyl substituted by carbocyclic aryl,
  - mono-C<sub>1-5</sub> alkylaminosulfonyl, and
  - di-C<sub>1-5</sub> alkylaminosulfonyl,
- (v) heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
- halogen,
  - nitro,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:
    - C<sub>1-5</sub> alkylthio,
    - C<sub>1-5</sub> alkylthio substituted by carbocyclic aryl, and
    - C<sub>1-5</sub> alkylthio substituted by halogenated carbocyclic aryl,
  - carbocyclic aryloxy,
  - carbocyclic aryloxy substituted by halogen,
  - carbocyclic aryloxy substituted by C<sub>1-5</sub> alkyl,
  - carbocyclic aryl,
  - carbocyclic aryl substituted by halogen,
  - carbocyclic aryl substituted by nitro, and
  - heterocyclyl;
- wherein carbocyclic aryl is phenyl or naphthyl;
- carbocyclyl is 1-oxo-indanyl;
- heterocyclyl is 1,2,3-triazolyl, 1*H*-indolyl, 1*H*-pyrrolyl, 2,3-dihydro-benzofuryl, 9*H*-xanthenyl, benzo[2,1,3]oxadiazolyl, benzo[1,2,5]oxadiazolyl, benzo[b]thienyl, furyl, isoxazolyl, pyridyl, quinoxalyl,



thiazolyl, or thienyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I)

5 wherein the compound is selected from the group consisting of:

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3-methoxybenzamide;

3-bromo-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-benzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2,1,3-benzoxadiazole-5-carboxamide;

10 3-chloro-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-benzamide;

4-chloro-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-benzamide;

4-chloro-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3-nitrobenzamide;

3,5-dichloro-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)benzamide;

15 3,4-dichloro-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)benzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2,2-diphenylacetamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3,4-difluorobenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3,5-difluorobenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3-fluoro-5-

20 (trifluoromethyl)benzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-4-methyl-3-

nitrobenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3-nitrobenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-phenoxybutanamide;

25 N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3-methylbenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3-(trifluoromethoxy)-benzamide;

4-bromo-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3-

methylbenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3-iodobenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2,5-dimethyl-3-furamide;

3-chloro-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-4-

5 fluorobenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3,5-dimethoxybenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3,5-bis(trifluoromethyl)-benzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-4-fluoro-3-

10 methylbenzamide;

2,5-dichloro-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)thiophene-3-carboxamide;

1-benzyl-3-tert-butyl-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-1H-pyrazole-5-carboxamide;

15 N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-(1-naphthyl)acetamide;

2-(4-chlorophenoxy)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-acetamide;

1-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-cyclopentanecarboxamide;

20 3-(2-chloro-6-fluorophenyl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-5-methylisoxazole-4-carboxamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-4-fluoro-3-(trifluoromethyl)benzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-5-methyl-2-phenyl-2H-

25 1,2,3-triazole-4-carboxamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-(4-methoxyphenoxy)-5-nitrobenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-phenoxyacetamide;

- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-quinoxaline-2-carboxamide;
- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3-(trifluoromethyl)-benzamide;
- 5 N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-(pentafluorophenoxy)-acetamide;
- 2-(3-chlorophenoxy)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-acetamide;
- 3-(2,6-dichlorophenyl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-5-methylisoxazole-4-carboxamide;
- 10 N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-phenoxy nicotinamide;
- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-(4-methylphenoxy)-nicotinamide;
- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-4-[(dipropylamino)-sulfonyl]benzamide;
- 15 2-(4-chlorophenoxy)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-methylpropanamide;
- 2-(2,3-dihydro-1-benzofuran-5-yl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-1,3-thiazole-4-carboxamide;
- 20 3-tert-butyl-1-(2,4-dichlorobenzyl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-1H-pyrazole-5-carboxamide;
- 6-chloro-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2H-chromene-3-carboxamide;
- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-(2-thienyl)-1,3-thiazole-25 4-carboxamide;
- 5-(4-chloro-2-nitrophenyl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-furamide;
- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-5-iodo-2-furamide;

- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)-5-(4-methyl-2-nitrophenyl)-2-furamide;
- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)-5-nitrothiophene-2-carboxamide;
- 5 N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)-3-methyl-4-nitrobenzamide;
- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)-3-methoxy-4-nitrobenzamide;
- 1-benzyl-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)-1H-indole-3-carboxamide;
- 10 3-acetyl-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)-benzamide;
- 5-bromo-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)-2-furamide;
- 5-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-2-furamide;
- 15 4,5-dibromo-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)thiophene-2-carboxamide;
- 2-(3,5-di-tert-butyl-4-hydroxyphenyl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)acetamide;
- N<sup>2</sup>,N<sup>6</sup>-dibenzoyl-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-
- 20 lysinamide;
- 3-(dimethylamino)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-benzamide;
- 4,5-dibromo-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-2-furamide;
- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)-2-(1H-indol-3-yl)-
- 25 acetamide;
- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)-2-(5-methyl-2-phenyl-1,3-thiazol-4-yl)acetamide;
- N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}cyclohexyl)-2-(1H-indol-3-yl)-4-oxo-4-

phenylbutanamide;

4-(4-bromophenyl)-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-2-(1H-indol-3-yl)-4-oxobutanamide;

3,5-dichloro-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-2-[(3-phenylprop-2-ynoyl)amino]benzamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-2-(1-methyl-1H-indol-3-yl)-4-(4-methylphenyl)-4-oxobutanamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-2-methyl-1-(3-morpholin-4-ylpropyl)-5-phenyl-1H-pyrrole-3-carboxamide;

10 N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-4-(4-nitrophenyl)-butanamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-2-(2-phenyl-1H-indol-3-yl)acetamide;

N<sup>2</sup>-benzoyl-N<sup>5</sup>-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-N<sup>1</sup>,N<sup>1</sup>-

15 dipropylglutamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-3-phenoxybenzamide;

3-benzoyl-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)benzamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-2-(ethylthio)-2,2-diphenylacetamide;

20 N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N'-[(1R)-1-(1-naphthyl)ethyl]phthalamide;

(2S)-2-(3-benzoylphenyl)-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-propanamide;

N'-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N,N-bis[(1S)-1-

25 phenylethyl]phthalamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-2-[(1E)-5-fluoro-2-methyl-1-[4-(methylsulfinyl)benzylidene]-1H-inden-3-yl]acetamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-2-[4-(2-thienylcarbonyl)-

- phenyl]propanamide;
- 3-(benzyloxy)-N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl}-4-methoxybenzamide;
- N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-methyl-1,5-diphenyl-1H-
- 5 pyrrole-3-carboxamide;
- 1-{2-[(2-chloro-6-fluorobenzyl)thio]ethyl}-N-(cis-4-{{[4-(dimethylamino)-pyrimidin-2-yl]-amino} cyclohexyl)-2-methyl-5-phenyl-1H-pyrrole-3-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-phenoxybenzamide;
- N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-phenylquinoline-4-
- 10 carboxamide;
- 2-[4-(4-chlorophenyl)-2-phenyl-1,3-thiazol-5-yl]-N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)acetamide;
- N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-1-[(4-methylphenyl)sulfonyl]-1H-pyrrole-3-carboxamide;
- 15 N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-5-(3-nitrophenyl)-2-furamide;
- 3-chloro-N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-4-(isopropylsulfonyl)-5-(methylthio)thiophene-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-3-iodo-4-
- 20 (isopropylsulfonyl)-5-(methylthio)thiophene-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-5-nitrothiophene-3-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-1-methyl-4-nitro-1H-pyrrole-2-carboxamide;
- 25 N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-4-nitrobenzamide;
- N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-3,5-dimethyl-4-nitrobenzamide;
- N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-mesityl-2-oxoacetamide;

- 3,5-di-tert-butyl-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-4-hydroxybenzamide;
- 4-chloro-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-methyl]-benzamide;
- 5 (2E)-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-methyl]-3-phenylacrylamide;
- 4-chloro-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-methyl]-3-nitrobenzamide;
- 2-(4-chlorophenyl)-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-methyl]acetamide;
- 10 3,5-dichloro-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]-benzamide;
- 3,4-dichloro-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]-benzamide;
- 15 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-2,2-diphenylacetamide;
- 2,4-dichloro-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]-5-fluorobenzamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-2-phenoxybutanamide;
- 20 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-2-phenylbutanamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-2-(3-methoxyphenyl)acetamide;
- 25 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-2-(4-methoxyphenyl)acetamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-3,5-bis(trifluoromethyl)benzamide;

- (2E)-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-methyl]-3-(4-nitrophenyl)acrylamide;
- 2-(2-bromophenyl)-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-methyl]acetamide;
- 5 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-2-(propylthio)-nicotinamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-2-(1-naphthyl)-acetamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-9-oxo-9H-10 fluorene-4-carboxamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-2,4,6-trimethylbenzamide;
- 2,4,6-trichloro-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]-benzamide;
- 15 (2E)-3-(2-chlorophenyl)-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-methyl]acrylamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-2-(2,3,6-trichlorophenyl)acetamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-2,3-20 diphenylpropanamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-5-iodo-2-furamide;
- (2E)-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-methyl]-3-(3-nitrophenyl)acrylamide;
- 25 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-3-oxoindane-1-carboxamide;
- 2-benzyl-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-methyl]-benzamide;



- 2,2-bis(4-chlorophenyl)-N-[(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-methyl]acetamide;
- N-[(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)methyl]-3-methyl-4-nitrobenzamide;
- 5 N-[(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)methyl]-3-methoxy-4-nitrobenzamide;
- N-[(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)methyl]-2-[2-(trifluoromethoxy)phenyl]acetamide;
- N-[(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)methyl]-9H-xanthene-9-
- 10 carboxamide;
- 2-(1-benzothien-3-yl)-N-[(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-methyl]acetamide;
- N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-2-(4-fluoro-phenoxy)-nicotinamide;
- 15 N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-C-(ethyl-phenyl-amino)-acetamide;
- C-[cis-(4-chloro-phenyl)-ethyl-amino]-N-[4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-acetamide;
- 2-(3,4-difluoro-phenyl)-N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-
- 20 acetamide;
- 4-chloro-N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-3-fluoro-benzamide;
- 5-bromo-N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-nicotinamide;
- 3-chloro-4-fluoro-N-[cis-4-(4-methylamino-pyrimidin-2-ylamino)-cyclohexyl]-benzamide;
- N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-4-fluoro-benzamide;
- 25 3-chloro-N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-5-fluoro-benzamide;
- N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-3,4,5-trifluoro-benzamide;
- N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexylmethyl]-3,4-difluoro-benzamide;

2-(3,4-dichloro-phenoxy)-N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-acetamide;

N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-2-(3-methoxy-phenoxy)-acetamide; and

- 5 N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-C-(ethyl-phenyl-amino)-acetamide;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

- 10 3-bromo-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-benzamide;  
N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2,1,3-benzoxadiazole-5-carboxamide;

3-chloro-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-benzamide;

4-chloro-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-3-

- 15 nitrobenzamide;

3,5-dichloro-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)benzamide;

3,4-dichloro-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)benzamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-3,4-difluorobenzamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-3-nitrobenzamide;

- 20 N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-3-(trifluoromethoxy)-benzamide;

4-bromo-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-3-methylbenzamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-3-iodobenzamide;

- 25 3-chloro-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-4-fluorobenzamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-3,5-dimethoxybenzamide;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-3,5-bis(trifluoromethyl)-

benzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-4-fluoro-3-methylbenzamide;

2-(4-chlorophenoxy)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-

5 acetamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-4-fluoro-3-(trifluoromethyl)benzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-5-methyl-2-phenyl-2H-1,2,3-triazole-4-carboxamide;

10 N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-(4-methoxyphenoxy)-5-nitrobenzamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-quinoxaline-2-carboxamide;

2-(3-chlorophenoxy)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-

15 acetamide;

3-(2,6-dichlorophenyl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-5-methylisoxazole-4-carboxamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-(4-methylphenoxy)-nicotinamide;

20 N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-4-[(dipropylamino)-sulfonyl]benzamide;

2-(2,3-dihydro-1-benzofuran-5-yl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino}-cyclohexyl)-1,3-thiazole-4-carboxamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-(2-thienyl)-1,3-thiazole-

25 4-carboxamide;

5-(4-chloro-2-nitrophenyl)-N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-2-furamide;

N-(cis-4-{{4-(dimethylamino)pyrimidin-2-yl}amino} cyclohexyl)-3-methoxy-4-

- nitrobenzamide;
- 5-bromo-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-furamide;
- 5-(4-chlorophenyl)-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-2-furamide;
- 5 2-(3,5-di-tert-butyl-4-hydroxyphenyl)-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)acetamide;
- 4,5-dibromo-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-2-furamide;
- N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-(1H-indol-3-yl)-4-oxo-4-phenylbutanamide;
- 10 N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-(1-methyl-1H-indol-3-yl)-4-(4-methylphenyl)-4-oxobutanamide;
- N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-(2-phenyl-1H-indol-3-yl)acetamide;
- N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-(ethylthio)-2,2-
- 15 diphenylacetamide;
- N'-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-N,N-bis[(1S)-1-phenylethyl]phthalamide;
- 3-(benzyloxy)-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-4-methoxybenzamide;
- 20 N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-methyl-1,5-diphenyl-1H-pyrrole-3-carboxamide;
- 1-{2-[(2-chloro-6-fluorobenzyl)thio]ethyl}-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-2-methyl-5-phenyl-1H-pyrrole-3-carboxamide;
- 2-[4-(4-chlorophenyl)-2-phenyl-1,3-thiazol-5-yl]-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-
- 25 yl]amino} cyclohexyl)acetamide;
- N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-5-nitrothiophene-3-carboxamide;
- N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-1-methyl-4-nitro-1H-

- pyrrole-2-carboxamide;
- 3,5-di-tert-butyl-N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)-4-hydroxybenzamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-2,2-
- 5 diphenylacetamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-2-phenylbutanamide;
- (2E)-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-methyl]-3-(4-nitrophenyl)acrylamide;
- 10 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-2-(1-naphthyl)-acetamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-2-(2,3,6-trichlorophenyl)acetamide;
- (2E)-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-methyl]-3-(3-
- 15 nitrophenyl)acrylamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-3-oxoindane-1-carboxamide;
- 2,2-bis(4-chlorophenyl)-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-methyl]acetamide;
- 20 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-3-methyl-4-nitrobenzamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-3-methoxy-4-nitrobenzamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-2-[2-
- 25 (trifluoromethoxy)phenyl]acetamide;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-9H-xanthene-9-carboxamide;
- 2-(1-benzothien-3-yl)-N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-

methyl]acetamide;

N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-2-(4-fluoro-phenoxy)-  
nicotinamide;

N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-C-(ethyl-phenyl-amino)-  
5 acetamide;

C-[cis-(4-chloro-phenyl)-ethyl-amino]-N-[4-(4-dimethylamino-pyrimidin-2-ylamino)-  
cyclohexyl]-acetamide;

4-chloro-N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-3-fluoro-benzamide;

N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-3,4,5-trifluoro-benzamide;

10 2-(3,4-dichloro-phenoxy)-N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-  
acetamide;

N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-2-(3-methoxy-phenoxy)-  
acetamide; and

N-[cis-4-(4-dimethylamino-pyrimidin-2-ylamino)-cyclohexyl]-C-(ethyl-phenyl-amino)-  
15 acetamide;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_1$  is selected from the group consisting of:

(i)  $C_{1-3}$  alkyl, and

$C_{1-3}$  alkyl substituted by substituent(s) independently selected from the group  
20 consisting of:

• $C_{1-5}$  alkoxy carbonyl,

• $C_{1-5}$  alkylthio,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from  
25 the group consisting of:

•halogen,

• $C_{1-5}$  alkyl, and

• $C_{2-5}$  alkenyl,

- (ii) C<sub>3-6</sub> cycloalkyl,  
C<sub>3-6</sub> cycloalkyl substituted by carbocyclic aryl,
- (iii) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
5 group consisting of:
- halogen,
  - cyano,
  - nitro,
  - C<sub>1-5</sub> alkyl,
  - 10 •C<sub>1-5</sub> alkyl substituted by halogen,
  - C<sub>1-3</sub> alkoxy carbonyl,
  - C<sub>1-5</sub> alkoxy,
  - C<sub>3-6</sub> cycloalkoxy,
  - carbocyclic aryloxy,
  - 15 •C<sub>1-5</sub> alkylthio, and
  - carbocyclic aryl,
- (iv) heterocyclyl, and  
heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:
- 20 •C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by halogen, and
  - carbocyclic aryl;
- L is Formula (VII);  
Y is -C(O)NR<sub>5</sub>-;
- 25 wherein carbocyclic aryl is phenyl or naphthyl;  
heterocyclyl is 2,3-dihydro-benzo[1,4]dioxinyl,  
3,4-dihydro-2*H*-benzo[b][1,4]dioxepinyl, benzo[1,3]dioxolyl, furyl, or isoxazolyl;  
and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>2</sub> is methylamino or dimethylamino; p is 0;

R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single bond; B is a single bond or -CH<sub>2</sub>-; R<sub>5</sub> is hydrogen; or a

5 pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-5</sub> alkyl, and

C<sub>1-5</sub> alkyl substituted by carbocyclic aryl,

(ii) carbocyclic aryl, and

10 carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•nitro,

•C<sub>1-5</sub> alkyl,

15 •C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy, and

•C<sub>3-6</sub> cycloalkoxy,

(iii) heterocyclyl, and

heterocyclyl substituted by C<sub>1-5</sub> alkyl, and

20 heterocyclyl substituted by carbocyclic aryl;

wherein carbocyclic aryl is phenyl or naphthyl;

heterocyclyl is isoxazolyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

25 In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N'-mesitylurea;

N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N'-(2,4,6-trichlorophenyl)-



urea;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N'-(2,4,6-tribromophenyl)-

urea;

N-(2,4-dibromo-6-fluorophenyl)-N'-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-

5 cyclohexyl)urea;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N'-(diphenylmethyl)urea;

N-(4-bromo-2,6-dimethylphenyl)-N'-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-

cyclohexyl)urea;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N'-[1-(1-naphthyl)ethyl]-

10 urea;

N-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N'-(3,4,5-

trimethoxyphenyl)urea;

N-(4-chloro-2-methylphenyl)-N'-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-

cyclohexyl)urea;

15 N-(5-chloro-2,4-dimethoxyphenyl)-N'-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-

cyclohexyl)urea;

N-(4-bromo-2-methylphenyl)-N'-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-

cyclohexyl)urea;

N-(2,6-dibromo-4-isopropylphenyl)-N'-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-

20 cyclohexyl)urea;

N-[3-(cyclopentyloxy)-4-methoxyphenyl]-N'-(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]-  
amino}cyclohexyl)urea;

N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-N'-(2,6-  
dimethylphenyl)urea;

25 N-(2,4-difluorophenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-  
methyl]urea;

N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)methyl]-N'-(2-ethyl-6-  
methylphenyl)urea;

- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(4-fluorophenyl)urea;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-mesitylurea;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(2,4,6-trichlorophenyl)urea;
- 5 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(2,4,6-tribromophenyl)urea;
- N-(2,4-dibromo-6-fluorophenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]urea;
- 10 N-(2,6-diethylphenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-methyl]urea;
- N-(2-chloro-6-(trifluoromethyl)phenyl)-N'-[(cis-4-{[4-(dimethylamino)-pyrimidin-2-yl]-amino} cyclohexyl)methyl]urea;
- N-(2-chloro-6-methylphenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]urea;
- 15 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(2-ethyl-6-isopropylphenyl)urea;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(2-isopropyl-6-methylphenyl)urea;
- 20 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(2-methyl-3-nitrophenyl)urea;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(2-propylphenyl)urea;
- N-(2-tert-butyl-6-methylphenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]urea;
- 25 N-(2-tert-butylphenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)-methyl]urea;
- N-(3-chloro-2-methylphenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-

- cyclohexyl)methyl]urea;
- N-(4-bromo-2,6-difluorophenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]urea;
- N-[4-chloro-2-(trifluoromethyl)phenyl]-N'-[(cis-4-{[4-(dimethylamino)-pyrimidin-2-yl]-
- 5 amino} cyclohexyl)methyl]urea;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(diphenylmethyl)urea;
- N-(4-bromo-2,6-dimethylphenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]urea;
- 10 N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(3-methyl-5-phenylisoxazol-4-yl)urea;
- N-(3,5-dichlorophenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]-amino} cyclohexyl)-methyl]urea;
- N-(2,3-dichlorophenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]-amino} cyclohexyl)-
- 15 methyl]urea;
- N-(2,6-diisopropylphenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]-amino}-cyclohexyl)methyl]urea;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(2,3-dimethyl-6-nitrophenyl)urea;
- 20 N-(2,6-dibromo-4-fluorophenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl)methyl]urea;
- N-(2,6-dichlorophenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]-amino} cyclohexyl)-methyl]urea;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(2-methoxy-5-
- 25 methylphenyl)urea;
- N-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino} cyclohexyl)methyl]-N'-(2-methyl-6-nitrophenyl)urea;
- N-(3,4-difluorophenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]-amino} cyclohexyl)-

methyl]urea;

N-(3,5-difluorophenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]-amino}cyclohexyl)-methyl]urea; and

N-(3-chloro-4-fluorophenyl)-N'-[(cis-4-{[4-(dimethylamino)pyrimidin-2-yl]amino}-

5 cyclohexyl)methyl]urea;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-5</sub> alkyl, and

C<sub>1-5</sub> alkyl substituted by substituent(s) independently selected from the group  
10 consisting of:

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:

•halogen, and

15 •C<sub>1-5</sub> alkoxy,

(ii) carbocyclyl,

(iii) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:

20 •halogen,

•cyano,

•nitro,

•C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by halogen,

25 •C<sub>1-5</sub> alkoxy carbonyl,

•C<sub>1-5</sub> alkoxy,

•C<sub>1-5</sub> alkoxy substituted by halogen,

•mono-C<sub>1-5</sub> alkylamino,

- di-C<sub>1-5</sub> alkylamino, and
  - carbocyclic aryl,
  - (iv) heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the group consisting of:
- C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkoxy carbonyl, and
  - carbocyclic aryl;
- L is Formula (VII);
- Y is -C(S)NR<sub>5</sub>;
- wherein carbocyclic aryl is phenyl or naphthyl;
- carbocyclyl is bicyclo[2.2.1]heptyl;
- heterocyclyl is 2,3-dihydro-benzo[1,4]dioxinyl, benzo[1,3]dioxolyl, isoxazolyl, or thienyl; and
- halogen is fluoro, chloro, bromo, or iodo;
- or a pharmaceutically acceptable salt, hydrate, or solvate thereof.
- In some embodiments of the present invention, R<sub>2</sub> is methylamino, or dimethylamino; p is 0; R<sub>3</sub> and R<sub>4</sub> are hydrogen; A is a single bond; B is a single bond or -CH<sub>2</sub>-; R<sub>5</sub> is hydrogen; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.
- In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:
- carbocyclic aryl, and
  - carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
- halogen,
  - cyano,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkoxy,
  - mono-C<sub>1-5</sub> alkylamino, and

•di-C<sub>1-3</sub> alkylamino;

wherein carbocyclic aryl is phenyl or naphthyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

- 5 In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

N-(4-cyanophenyl)-N'-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl}-thiourea;

- 10 N-(2,4-dimethoxyphenyl)-N'-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]-amino}-cyclohexyl})thiourea;

N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N'-(3,4,5-trimethoxyphenyl)thiourea;

N-(3,4-dimethoxyphenyl)-N'-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]-amino}-cyclohexyl})thiourea;

- 15 N-[4-(dimethylamino)-1-naphthyl]-N'-(cis-4-{{[4-(dimethylamino)-pyrimidin-2-yl]amino}-cyclohexyl})thiourea;

N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N'-(2,4,6-tribromophenyl)-thiourea;

N-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}cyclohexyl)-N'-mesitylthiourea;

- 20 N-(4-bromo-2,6-dimethylphenyl)-N'-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl})thiourea;

N-(5-chloro-2,4-dimethoxyphenyl)-N'-(cis-4-{{[4-(dimethylamino)-pyrimidin-2-yl]amino}-cyclohexyl})thiourea;

- 25 N-(2,4-dibromo-6-fluorophenyl)-N'-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl})thiourea; and

N-(2,4-dichloro-6-methylphenyl)-N'-(cis-4-{{[4-(dimethylamino)pyrimidin-2-yl]amino}-cyclohexyl})thiourea;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

- (i) C<sub>1-8</sub> alkyl, and  
C<sub>1-8</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:  
5 •halogen,  
•C<sub>1-5</sub> alkoxy,  
•C<sub>1-5</sub> alkoxy substituted by carbocyclic aryl,  
•carbocyclyl,  
•carbocyclic aryl,  
10 •carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:  
••halogen,  
••nitro, and  
••C<sub>1-5</sub> alkoxy,  
15 (ii) C<sub>2-5</sub> alkenyl,  
(iii) carbocyclyl,  
(iv) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:  
20 •halogen,  
•C<sub>1-5</sub> alkyl,  
•C<sub>1-5</sub> alkyl substituted by halogen, and  
•C<sub>1-5</sub> alkoxy;  
L is Formula (VII);  
25 Y is -C(O)O-;  
wherein carbocyclic aryl is phenyl or naphthyl;  
carbocyclyl is 9H-fluorenyl or menthyl; and  
halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_2$  is methylamino or dimethylamino;  $p$  is 0;  $R_3$  and  $R_4$  are hydrogen;  $A$  is a single bond;  $B$  is a single bond or  $-CH_2-$ ; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

5 In some embodiments of the present invention,  $Q$  is Formula (IV);  $p$  is 1 or 2;

$R_1$  is selected from the group consisting of:

(i)  $C_{1-16}$  alkyl, and

$C_{1-16}$  alkyl substituted by substituent(s) independently selected from the group consisting of:

10 •hydroxy,

•oxo,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by substituent(s) independently selected from the group consisting of:

15 ••halogen,

•• $C_{1-5}$  alkyl,

•• $C_{1-5}$  alkyl substituted by halogen, and

•• $C_{1-5}$  alkoxy,

•heterocyclyloxy,

20 •heterocyclyloxy substituted by substituent(s) independently selected from the group consisting of:

••halogen,

•• $C_{1-5}$  alkyl, and

•• $C_{1-5}$  alkyl substituted by halogen,

25 •mono-carbocyclic arylamino,

•mono-carbocyclic arylamino substituted by substituent(s) independently selected from the group consisting of:

••halogen,



- C<sub>1-5</sub> alkoxy, and
- C<sub>1-5</sub> alkyl,
- carbocyclic arylsulfinyl,
- carbocyclic arylsulfinyl substituted by substituent(s) independently selected
- 5 from the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkyl substituted by halogen,
  - carbocyclic arylsulfonyl,
  - 10 •carbocyclic arylsulfonyl substituted by substituent(s) independently selected from the group consisting of:
    - halogen,
    - C<sub>1-5</sub> alkyl, and
    - C<sub>1-5</sub> alkyl substituted by halogen,
    - 15 •carbocyclic aryl,
    - carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
      - halogen,
      - nitro,
      - 20 ••C<sub>1-5</sub> alkylcarbonylamino,
      - C<sub>3-6</sub> cycloalkylcarbonylamino,
      - C<sub>1-5</sub> alkyl,
      - C<sub>1-5</sub> alkyl substituted by halogen,
      - C<sub>1-5</sub> alkoxy, and
      - 25 ••C<sub>1-5</sub> alkoxy substituted by halogen, and
      - heterocycyl,
- (ii) C<sub>3-12</sub> cycloalkyl, and
- C<sub>3-12</sub> cycloalkyl substituted by substituent(s) independently selected from the

group consisting of:

•carbocyclic aryl, and

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

5

••C<sub>1-5</sub> alkoxy,

••halogen,

••C<sub>1-5</sub> alkyl, and

••C<sub>1-5</sub> alkyl substituted by halogen,

(iii) carbocyclic aryl, and

10

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•cyano,

•nitro,

15

•C<sub>1-10</sub> alkyl,

•C<sub>1-10</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

••halogen, and

••hydroxy,

20

•C<sub>1-9</sub> alkoxy,

•C<sub>1-9</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

••halogen, and

••carbocyclic aryl,

25

•carboxy,

•C<sub>1-5</sub> alkoxycarbonyl,

•di-C<sub>1-5</sub> alkylamino,

•C<sub>1-5</sub> alkylcarbonylamino,

- C<sub>3-6</sub> cycloalkylcarbonylamino,
- C<sub>1-5</sub> alkylthio,
- C<sub>1-5</sub> alkylsulfanyl,
- C<sub>1-5</sub> alkylsulfonyl,
- 5     •carbocyclic aryl,
- (iv)   heterocyclyl, and
- heterocyclyl substituted by substituent(s) independently selected from the
- group consisting of:
- halogen,
- 10     •hydroxy,
- amino,
- C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkyl substituted by halogen,
- C<sub>1-5</sub> alkoxy,
- 15     •carbocyclic aryloxy,
- carbocyclic aryloxy substituted by substituent(s) independently selected
- from the group consisting of:
- halogen,
- C<sub>1-5</sub> alkyl,
- 20     ••C<sub>1-5</sub> alkyl substituted by halogen, and
- C<sub>1-5</sub> alkoxy,
- heterocyclyloxy,
- heterocyclyloxy substituted by halogen,
- heterocyclyl sulfonyl,
- 25     • heterocyclyl sulfonyl substituted by C<sub>1-5</sub> alkyl,
- mono-carbocyclic arylamino,
- mono-carbocyclic arylamino substituted by halogen,
- C<sub>1-5</sub> alkylthio,

- C<sub>1-5</sub> alkylsulfinyl,
- carbocyclic arylsulfinyl,
- °carbocyclic arylsulfinyl substituted by halogen,
- °carbocyclic arylsulfonyl,
- 5     •carbocyclic arylsulfonyl substituted by substituent(s) independently  
selected from the group consisting of:
  - \*\*halogen,
  - \*\*C<sub>1-5</sub> alkoxy,
  - \*\*C<sub>1-5</sub> alkyl, and
  - 10     \*\*C<sub>1-5</sub> alkyl substituted by halogen,

R<sub>2</sub> is selected from the group consisting of:

- amino, C<sub>1-5</sub> alkyl, C<sub>1-5</sub> alkoxy, -N(R<sub>2a</sub>)(R<sub>2b</sub>), wherein R<sub>2a</sub> is hydrogen or C<sub>1-5</sub> alkyl and  
R<sub>2b</sub> is C<sub>1-5</sub> alkyl or C<sub>3-6</sub> cycloalkyl;
- wherein carbocyclic aryl is phenyl or naphthyl;
- 15     heterocyclyl is 3,4-dihydro-1*H*-isoquinolyl, benzo[1,3]dioxolyl, furyl,  
isoxazolyl, oxazolyl, pyrazolyl, pyrazinyl, pyridyl, pyrimidyl, or thienyl; and  
halogen is fluoro, chloro, bromo, or iodo;
- or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

- 20     (i)    C<sub>1-16</sub> alkyl, and  
C<sub>1-16</sub> alkyl substituted by substituent(s) independently selected from the  
group consisting of:
- oxo,
- carbocyclic aryl,
- 25     °carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:
- halogen,
- C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkyl substituted by halogen, and

••C<sub>1-5</sub> alkoxy, and

••C<sub>1-5</sub> alkoxy substituted by halogen,

(ii) heterocyclyl, and

5 heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic arylsulfinyl, and

•carbocyclic arylsulfinyl substituted by halogen,

L is Formula (VII);

10 Y is a single bond or -CH<sub>2</sub>-;

R<sub>2</sub> is -N(R<sub>2a</sub>)(R<sub>2b</sub>), wherein R<sub>2a</sub> is C<sub>1-5</sub> alkyl and R<sub>2b</sub> is C<sub>1-5</sub> alkyl;

carbocyclic aryl is phenyl;

heterocyclyl is pyrazinyl; and

halogen is fluoro, chloro, or bromo;

15 or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-16</sub> alkyl, and

C<sub>1-16</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

20 •carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen, and

•C<sub>1-5</sub> alkoxy,

25 (ii) heterocyclyl, and

heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic arylsulfinyl, and

•carbocyclic arylsulfinyl substituted by halogen,

$R_2$  is  $-N(R_{2a})(R_{2b})$ , wherein  $R_{2a}$  is  $C_{1-5}$  alkyl and  $R_{2b}$  is  $C_{1-5}$  alkyl;

carbocyclic aryl is phenyl;

heterocyclyl is pyrazinyl; and

5 halogen is fluoro or bromo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_1$  is selected from the group consisting of:

heterocyclyl, and

10 heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic arylsulfinyl, and

•carbocyclic arylsulfinyl substituted by halogen,

$R_2$  is  $-N(R_{2a})(R_{2b})$ , wherein  $R_{2a}$  is  $C_{1-5}$  alkyl and  $R_{2b}$  is  $C_{1-5}$  alkyl;

carbocyclic aryl is phenyl;

15 heterocyclyl is pyrazinyl; and

halogen is fluoro;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $p$  is 1 and  $T$  is  $C_{1-5}$  alkyl;  $R_3$  and  $R_4$  are both hydrogen;  $A$  and  $B$  are both single bonds; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

$N^2$ -{cis-4-[(3,5-dimethoxybenzyl)amino]cyclohexyl}- $N^4,N^4$ ,5-trimethylpyrimidine-2,4-diamine;

25  $N^2$ -{cis-4-[(3-bromobenzyl)amino]cyclohexyl}- $N^4,N^4$ ,5,6-tetramethylpyrimidine-2,4-diamine;

$N^2$ -{cis-4-[(3,4-difluorobenzyl)amino]cyclohexyl}- $N^4,N^4$ ,5,6-tetramethylpyrimidine-2,4-diamine; and

$N^2$ -[cis-4-((6-[(3,4-difluorophenyl)sulfinyl]pyrazin-2-yl) amino)cyclohexyl]- $N^4, N^4, 5$ -trimethylpyrimidine-2,4-diamine;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the  
5 compound is:

$N^2$ -[cis-4-((6-[(3,4-difluorophenyl)sulfinyl]pyrazin-2-yl) amino)cyclohexyl]- $N^4, N^4, 5$ -trimethylpyrimidine-2,4-diamine;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_1$  is selected from the group consisting of:

- 10 (i)  $C_{1-16}$  alkyl, and  
 $C_{1-16}$  alkyl substituted by substituent(s) independently selected from the  
group consisting of:
- hydroxy,
  - carbocyclic aryloxy,
  - 15 •carbocyclic aryloxy substituted by substituent(s) independently selected  
from the group consisting of:
    - halogen,
    - $C_{1-5}$  alkyl,
    - $C_{1-5}$  alkyl substituted by halogen, and
    - 20 •• $C_{1-5}$  alkoxy,
    - heterocycloxy,
    - heterocycloxy substituted by substituent(s) independently selected from  
the group consisting of:
      - halogen,
      - 25 •• $C_{1-5}$  alkyl, and
      - $C_{1-5}$  alkyl substituted by halogen,
      - mono-carbocyclic arylamino,
      - mono-carbocyclic arylamino substituted by substituent(s) independently

selected from the group consisting of:

••halogen,

••C<sub>1-5</sub> alkoxy, and

••C<sub>1-5</sub> alkyl,

5 •carbocyclic arylsulfinyl,

•carbocyclic arylsulfinyl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••C<sub>1-5</sub> alkyl, and

10 •C<sub>1-5</sub> alkyl substituted by halogen,

•carbocyclic arylsulfonyl,

•carbocyclic arylsulfonyl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

15 •C<sub>1-5</sub> alkyl, and

••C<sub>1-5</sub> alkyl substituted by halogen,

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkyl substituted by halogen, and

••C<sub>1-5</sub> alkoxy,

(ii) C<sub>3-12</sub> cycloalkyl, and

25 C<sub>3-12</sub> cycloalkyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl, and



•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

∞ C<sub>1-5</sub> alkoxy,

∞ halogen,

5                   ••C<sub>1-5</sub> alkyl, and

∞C<sub>1-5</sub> alkyl substituted by halogen,

(iii) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

10                   •halogen,

•cyano,

•nitro,

•C<sub>1-10</sub> alkyl,

15                   •C<sub>1-10</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

••halogen, and

••hydroxy,

•C<sub>1-9</sub> alkoxy,

•C<sub>1-9</sub> alkoxy substituted by halogen,

20                   •carboxy,

•C<sub>1-5</sub> alkoxy carbonyl,

•di-C<sub>1-5</sub> alkylamino,

•C<sub>1-5</sub> alkylcarbonylamino,

•C<sub>3-6</sub> cycloalkylcarbonylamino,

25                   •C<sub>1-5</sub> alkylsulfonyl, and

∞carbocyclic aryl,

(iv) heterocyclyl, and

heterocyclyl substituted by substituent(s) independently selected from the

group consisting of:

•halogen,

•hydroxy,

•amino,

5                   •C<sub>1-5</sub> alkyl,

•C<sub>1-5</sub> alkyl substituted by halogen,

•C<sub>1-5</sub> alkoxy,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by substituent(s) independently selected

10                   from the group consisting of:

••halogen,

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkyl substituted by halogen, and

••C<sub>1-5</sub> alkoxy,

15                   •heterocyclyloxy,

•heterocyclyloxy substituted by halogen,

•heterocyclyl sulfonyl,

• heterocyclyl sulfonyl substituted by C<sub>1-5</sub> alkyl,

•mono-carbocyclic arylamino,

20                   •mono-carbocyclic arylamino substituted by halogen,

•C<sub>1-5</sub> alkylthio,

•C<sub>1-5</sub> alkylsulfinyl,

•carbocyclic arylsulfonyl,

•carbocyclic arylsulfonyl substituted by substituents(s) independently

25                   selected from the group consisting of:

••halogen,

••C<sub>1-5</sub> alkoxy,

••C<sub>1-5</sub> alkyl, and

••C<sub>1-5</sub> alkyl substituted by halogen,

L is Formula (VII);

Y is -C(O)-;

R<sub>2</sub> is selected from the group consisting of:

5 amino, C<sub>1-5</sub> alkyl, C<sub>1-5</sub> alkoxy, -N(R<sub>2a</sub>)(R<sub>2b</sub>), wherein R<sub>2a</sub> is hydrogen or C<sub>1-5</sub> alkyl and R<sub>2b</sub> is C<sub>1-5</sub> alkyl or C<sub>3-6</sub> cycloalkyl;

wherein carbocyclic aryl is phenyl;

heterocyclyl is benzo[1,3]dioxolyl, furyl, isoxazolyl, oxazolyl, pyrazolyl, pyrazinyl, pyridyl, pyrimidyl, or thienyl; and

10 halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-16</sub> alkyl, and

15 C<sub>1-16</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•hydroxy,

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by substituent(s) independently selected from the group consisting of:

20 ••halogen,

••C<sub>1-5</sub> alkyl,

••C<sub>1-5</sub> alkyl substituted by halogen, and

••C<sub>1-5</sub> alkoxy,

•heterocyclyloxy,

25 •heterocyclyloxy substituted by halogen,

•mono-carbocyclic arylamino,

•mono-carbocyclic arylamino substituted by substituent(s) independently selected from the group consisting of:

- halogen,
- C<sub>1-5</sub> alkoxy, and
- C<sub>1-5</sub> alkyl,
- carbocyclic arylsulfinyl,
- 5 •carbocyclic arylsulfinyl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkyl substituted by halogen,
- 10 •carbocyclic arylsulfonyl,
- carbocyclic arylsulfonyl substituted by substituent(s) independently selected from the group consisting of:
  - C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkyl substituted by halogen,
- 15 •carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkyl substituted by halogen,
- 20 (ii) C<sub>3-12</sub> cycloalkyl, and
- C<sub>3-12</sub> cycloalkyl substituted by substituent(s) independently selected from the group consisting of:
  - carbocyclic aryl, and
- 25 •carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:
  - C<sub>1-5</sub> alkoxy,
  - halogen,

- C<sub>1-5</sub> alkyl, and
- C<sub>1-5</sub> alkyl substituted by halogen,
- (iii) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
5 group consisting of:
  - halogen,
  - cyano,
  - nitro,
  - C<sub>1-10</sub> alkyl,
  - 10 •C<sub>1-10</sub> alkyl substituted by substituent(s) independently selected from the  
group consisting of:
    - halogen, and
    - hydroxy,
    - C<sub>1-9</sub> alkoxy,
    - 15 •C<sub>1-9</sub> alkoxy substituted by halogen,
    - carboxy,
    - C<sub>1-5</sub> alkoxycarbonyl, and
    - C<sub>1-5</sub> alkylsulfonyl,
- (iv) heterocyclyl, and  
heterocyclyl substituted by substituent(s) independently selected from the  
20 group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by halogen,
  - 25 •C<sub>1-5</sub> alkoxy,
  - carbocyclic aryloxy,
  - carbocyclic aryloxy substituted by substituent(s) independently selected  
from the group consisting of:

- halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by halogen, and
  - C<sub>1-5</sub> alkoxy,
- 5           •heterocycloxy,
- heterocycloxy substituted by halogen,
  - heterocyclyl sulfonyl,
  - heterocyclyl sulfonyl substituted by C<sub>1-5</sub> alkyl,
  - mono-carbocyclic arylamino,
- 10           •mono-carbocyclic arylamino substituted by halogen,
- C<sub>1-5</sub> alkylthio,
  - carbocyclic arylsulfonyl,
  - carbocyclic arylsulfonyl substituted by substituents(s) independently selected from the group consisting of:
- 15           ••halogen,
- C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkyl substituted by halogen,
- R<sub>2</sub> is selected from the group consisting of:
- C<sub>1-5</sub> alkoxy, -N(R<sub>2a</sub>)(R<sub>2b</sub>), wherein R<sub>2a</sub> is hydrogen or C<sub>1-5</sub> alkyl and R<sub>2b</sub> is C<sub>1-5</sub> alkyl;
- 20           wherein carbocyclic aryl is phenyl;
- heterocyclyl is benzo[1,3]dioxolyl, furyl, isoxazolyl, oxazolyl, pyrazolyl, pyridyl, or thienyl; and
- halogen is fluoro, chloro, bromo, or iodo;
- or a pharmaceutically acceptable salt, hydrate, or solvate thereof.
- 25           In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:
- (i)       C<sub>1-16</sub> alkyl, and
  - C<sub>1-16</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

- hydroxy,
- carbocyclic aryloxy,
- carbocyclic aryloxy substituted by substituent(s) independently selected from the group consisting of:
  - 5           ••halogen,
  - C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by halogen, and
  - C<sub>1-5</sub> alkoxy,
- heterocyclyloxy,
- 10          •heterocyclyloxy substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkyl substituted by halogen,
- 15          •mono-carbocyclic arylamino,
- mono-carbocyclic arylamino substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - C<sub>1-5</sub> alkoxy, and
  - 20          ••C<sub>1-5</sub> alkyl,
- carbocyclic arylsulfinyl,
- carbocyclic arylsulfinyl substituted by substituent(s) independently selected from the group consisting of:
  - halogen,
  - 25          ••C<sub>1-5</sub> alkyl, and
  - C<sub>1-5</sub> alkyl substituted by halogen,
- carbocyclic aryl,
- carbocyclic aryl substituted by substituent(s) independently selected from

the group consisting of:

- halogen,
- C<sub>1-5</sub> alkyl, and
- C<sub>1-5</sub> alkyl substituted by halogen,

- 5                   (ii)   C<sub>3-12</sub> cycloalkyl, and  
C<sub>3-12</sub> cycloalkyl substituted by substituent(s) independently selected from the  
group consisting of:

- carbocyclic aryl, and
- carbocyclic aryl substituted by substituent(s) independently selected from

- 10                   the group consisting of:

- C<sub>1-5</sub> alkoxy,
- halogen,
- C<sub>1-5</sub> alkyl, and
- C<sub>1-5</sub> alkyl substituted by halogen,

- 15                   (iii)   carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:

- halogen,
- cyano,
- nitro,
- C<sub>1-10</sub> alkyl,
- C<sub>1-10</sub> alkyl substituted by halogen,
- C<sub>1-9</sub> alkoxy, and
- C<sub>1-9</sub> alkoxy substituted by halogen,

- 20
- 25                   (iv)   heterocyclyl, and  
heterocyclyl substituted by substituent(s) independently selected from the  
group consisting of:

- halogen,



- C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkyl substituted by halogen,
- C<sub>1-5</sub> alkoxy,
- carbocyclic aryloxy,
- 5       •carbocyclic aryloxy substituted by substituent(s) independently selected  
from the group consisting of:

- halogen,
- C<sub>1-5</sub> alkyl,
- C<sub>1-5</sub> alkyl substituted by halogen, and
- 10       ••C<sub>1-5</sub> alkoxy,
- C<sub>1-5</sub> alkylthio,
- carbocyclic arylsulfonyl,
- carbocyclic arylsulfonyl substituted by halogen,

R<sub>2</sub> is selected from the group consisting of:

- 15       -N(R<sub>2a</sub>)(R<sub>2b</sub>), wherein R<sub>2a</sub> is hydrogen or C<sub>1-5</sub> alkyl and R<sub>2b</sub> is C<sub>1-5</sub> alkyl;  
wherein carbocyclic aryl is phenyl;  
heterocyclyl is benzo[1,3]dioxolyl, furyl, pyrazolyl, pyridyl, or thienyl; and  
halogen is fluoro, chloro, bromo, or iodo;  
or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

- 20       In some embodiments of the present invention, p is 1 and T is C<sub>1-5</sub> alkyl; R<sub>3</sub> and R<sub>4</sub> are both  
hydrogen; A is a single bond and B is a single bond or -CH<sub>2</sub>-; or a pharmaceutically acceptable salt,  
hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the  
compound is selected from the group consisting of:

- 25       N-[(cis-4-[(4-(dimethylamino)-5-methylpyrimidin-2-yl]amino)cyclohexyl)methyl]-3,5-  
bis(trifluoromethyl)benzamide;
- N-[(cis-4-[[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino)cyclohexyl)methyl]-3,5-  
bis(trifluoromethyl)benzamide;

- N-[(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)methyl]-3,4-difluorobenzamide;
- 3,5-dichloro-N-[(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)-methyl]benzamide;
- 5 N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)methyl]-3,4-difluorobenzamide;
- N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)methyl]-3,5-dimethoxybenzamide;
- N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)methyl]-3-fluoro-
- 10 4-methylbenzamide;
- N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)methyl]-3-(trifluoromethyl)benzamide;
- N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)methyl]-3-(trifluoromethoxy)benzamide;
- 15 4-bromo-N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-methyl]-3-methylbenzamide;
- N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)methyl]-3-fluoro-4-(trifluoromethyl)benzamide;
- 3,5-dichloro-N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-
- 20 methyl]benzamide;
- 3,4-dichloro-N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-methyl]benzamide;
- 4-chloro-N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-methyl]benzamide;
- 25 4-chloro-N-[(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)-methyl]benzamide;
- N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} methyl)cyclohexyl]-3,5-dimethoxybenzamide;

- 4-bromo-N-[cis-4-({[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} methyl)-cyclohexyl]benzamide;
- 4-bromo-N-[cis-4-({[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} methyl)-cyclohexyl]-3-methylbenzamide;
- 5 3,5-dichloro-N-[cis-4-({[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} methyl)-cyclohexyl]benzamide;
- 3,4-dichloro-N-[cis-4-({[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} methyl)-cyclohexyl]benzamide;
- N-[cis-4-({[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} methyl)cyclohexyl]-3,5-
- 10 bis(trifluoromethyl)benzamide;
- N-[cis-4-({[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} methyl)cyclohexyl]-3,4-difluorobenzamide;
- 4-bromo-N-[cis-4-({[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} methyl)-cyclohexyl]benzamide;
- 15 4-bromo-N-[cis-4-({[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} methyl)-cyclohexyl]-3-methylbenzamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2-(2-fluorophenoxy)nicotinamide;
- N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)-3,4,5-
- 20 trimethoxybenzamide;
- N-(4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)-3-nitrobenzamide;
- N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)-2,2-diphenylacetamide;
- N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)-4-
- 25 methylbenzamide;
- 4-chloro-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)-benzamide;
- 3-chloro-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)-

benzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3,4-difluorobenzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-

5 methylbenzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-methoxybenzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-4-fluorobenzamide;

10 N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-3-methylbenzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-3-methoxybenzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-4-

15 methylbenzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-3,4-difluorobenzamide;

3-chloro-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-benzamide;

20 N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-(3-methylphenoxy)nicotinamide;

2-(4-bromophenoxy)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)nicotinamide;

2-(4-chlorophenoxy)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-25 cyclohexyl)nicotinamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-(4-fluorophenoxy)nicotinamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-(3-

fluorophenoxy)nicotinamide;

2-(2-bromophenoxy)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)nicotinamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2-(3-methoxyphenoxy)nicotinamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2-(4-methoxyphenoxy)nicotinamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2-(4-iodophenoxy)nicotinamide;

10 2-(3,4-dichlorophenoxy)-N-(cis-4-{[5-methyl-4-(methylamino)pyrimidin-2-yl]amino}-cyclohexyl)acetamide;

2-(2,3-dichlorophenoxy)-N-(cis-4-{[5-methyl-4-(methylamino)pyrimidin-2-yl]amino}-cyclohexyl)acetamide;

2-[(3,4-difluorophenyl)sulfonyl]-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-15 amino} cyclohexyl)nicotinamide;

N-(cis-4-{[4-(dimethylamino)-5-ethylpyrimidin-2-yl]amino} cyclohexyl)-3,4-difluorobenzamide;

N-[cis-4-{[4-[ethyl(methyl)amino]-5-methylpyrimidin-2-yl]amino} cyclohexyl]-3,4-difluorobenzamide;

20 N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)-3,5-dimethoxybenzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2-(2-methoxyphenoxy)nicotinamide;

25 2-(2-chlorophenoxy)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)nicotinamide;

2-(3-chlorophenoxy)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)nicotinamide;

2-(3-bromophenoxy)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-

- cyclohexyl)nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-[3-(trifluoromethyl)phenoxy]nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-(3-fluorophenoxy)acetamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-(3-methoxyphenoxy)acetamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-[3-(trifluoromethyl)phenoxy]acetamide;
- 2-(3-chlorophenoxy)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)acetamide;
- 2-{{5-chloropyridin-3-yl}oxy}-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)acetamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino} cyclohexyl)-3,4-difluorobenzamide;
- 2-(3,4-difluorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-hydroxyacetamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-hydroxy-2-(4-methoxyphenyl)acetamide;
- 2-(2,3-difluorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-hydroxyacetamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-hydroxy-2-[3-(trifluoromethyl)phenyl]acetamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-{{2-(trifluoromethyl)phenyl}sulfinyl}acetamide;
- 2-{{2-chlorophenyl}sulfinyl}-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)acetamide;
- 2-{{3-bromophenyl}sulfinyl}-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-

cyclohexyl)acetamide;

2-[(3,4-difluorophenyl)sulfinyl]-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-amino} cyclohexyl)acetamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-3-

5 (trifluoromethyl)benzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-3-

fluorobenzamide;

1- bromo-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)

benzamide;

10 N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-4-

(trifluoromethoxy)benzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-4-

fluorobenzamide;

3,4-dichloro-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-

15 benzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-3,5-

bis(trifluoromethyl)benzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-3,5-

dimethoxybenzamide;

20 N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2,4-

difluorobenzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2,5-

difluorobenzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2,3,4-

25 trifluorobenzamide;

4-chloro-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-

benzamide;

3-cyano-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-

benzamide;

4-cyano-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-

benzamide;

2-[(3,4-dichlorophenyl)sulfinyl]-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-

5 amino}cyclohexyl)acetamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-{[3-

(trifluoromethyl)phenyl]sulfinyl}acetamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-{[3-

(trifluoromethyl)phenyl]sulfonyl}acetamide;

10 N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-

(isopropylthio)nicotinamide;

2-(tert-butylthio)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-

cyclohexyl)nicotinamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-(propylthio)-

15 nicotinamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-3-

(methylsulfonyl)benzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-

fluorobenzamide;

20 N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-

(trifluoromethyl)benzamide;

3-cyano-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-

benzamide;

4-cyano-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-

25 benzamide;

N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino}cyclohexyl)benzamide;

N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino}cyclohexyl)-3-

(trifluoromethyl)benzamide;



- 3-cyano-N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-benzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-3-methylbenzamide;
- 5 3-chloro-N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-benzamide;
- 3-bromo-N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-benzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-3,5-
- 10 dimethoxybenzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-3,5-bis(trifluoromethyl)benzamide;
- 3,4-dichloro-N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-benzamide;
- 15 N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-4-(trifluoromethoxy)benzamide;
- 4-cyano-N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-benzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-4-
- 20 methylbenzamide;
- N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-4-fluorobenzamide;
- 4-chloro-N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-benzamide;
- 25 N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-2-methoxybenzamide;
- 4-bromo-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-benzamide;

- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-4-(trifluoromethyl)benzamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-3-methoxybenzamide;
- 5        5-bromo-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-2-furamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-5-methylisoxazole-3-carboxamide;
- 10       2-(3,5-difluorophenyl)-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}-cyclohexyl)-2-hydroxyacetamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-2-methyl-1,3-oxazole-4-carboxamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-2,6-dimethoxynicotinamide;
- 15       4-bromo-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-benzamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-4-(trifluoromethyl)benzamide;
- 4-bromo-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-3-methylbenzamide;
- 20       methylbenzamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-3-fluoro-4-methylbenzamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-4-fluoro-3-methylbenzamide;
- 25       N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-3-ethylbenzamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-3-(trifluoromethoxy)benzamide;

- 5-bromo-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino} cyclohexyl)-nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino} cyclohexyl)-5-methylthiophene-2-carboxamide
- 5 N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino} cyclohexyl)-6-(trifluoromethyl)nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino} cyclohexyl)-3,5-diethoxybenzamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino} cyclohexyl)-3-ethoxybenzamide;
- 10 N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino} cyclohexyl)-3-isopropoxybenzamide;
- 3,5-dichloro-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-benzamide;
- 15 4-bromo-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-3-methylbenzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-4-ethoxybenzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-4-fluoro-3-ethoxybenzamide;
- 20 N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-3-fluoro-4-methylbenzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-3-ethoxybenzamide;
- 25 N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino} cyclohexyl)-3,5-bis(trifluoromethyl)benzamide;
- N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino} cyclohexyl)-3-fluoro-4-(trifluoromethyl)benzamide;

- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-3-fluoro-5-(trifluoromethyl)benzamide;
- 3-chloro-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-4-fluorobenzamide;
- 5 N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-4-fluoro-3-methylbenzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-3-fluoro-4-methylbenzamide;
- 3,5-dichloro-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-10 benzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-3-(trifluoromethoxy)benzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-3,5-difluorobenzamide;
- 15 4-bromo-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-3-methylbenzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-3-ethylbenzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-4-20 (trifluoromethyl)benzamide;
- 4-bromo-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-benzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-4-ethylbenzamide;
- 25 N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-3,5-diethoxybenzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-3-ethoxybenzamide;

- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-3-isopropoxybenzamide;
- 5-bromo-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-nicotinamide;
- 5-bromo-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-2-furamide;
- 5-chloro-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl}-3-fluoro-5-(trifluoromethyl)benzamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl}-2,2-difluoro-1,3-benzodioxole-5-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl}-3-ethoxybenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl}-3-isopropoxybenzamide;
- 5-bromo-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl}-2-furamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl}-3,5-diethoxybenzamide;
- 4-chloro-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl}-3-(trifluoromethyl)benzamide;
- 5-bromo-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl}-nicotinamide;
- 3,4-dichloro-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl}-benzamide;
- 3-chloro-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl}-4-(trifluoromethoxy)benzamide;

- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-4-methoxy-3-(trifluoromethyl)benzamide;
- N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}cyclohexyl)-4-methoxy-3-(trifluoromethyl)benzamide;
- 5        2-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)-2-methylpropanamide;
- 1-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)cyclopropanecarboxamide;
- 10       1-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)cyclobutanecarboxamide;
- 1-(2,4-dichlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)cyclopropanecarboxamide;
- 2-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-cyclohexyl)-2-methylpropanamide;
- 15       1-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-cyclohexyl)cyclopropanecarboxamide;
- 1-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-cyclohexyl)cyclobutanecarboxamide;
- 1-(2,4-dichlorophenyl)-N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-cyclohexyl)cyclopropanecarboxamide;
- 20       2-[3,5-bis(trifluoromethyl)phenyl]-N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}cyclohexyl)acetamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]benzamide;
- 25       2-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)acetamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-1-(4-methylphenyl)cyclopropanecarboxamide;

- 2-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})propanamide;
- 2-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})-2-hydroxyacetamide;
- 5 N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-1-(4-methoxyphenyl)cyclopropanecarboxamide;
- N<sup>2</sup>-(3-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})-N<sup>2</sup>-methylglycinamide;
- N<sup>2</sup>-(3,4-dichlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})-N<sup>2</sup>-methylglycinamide;
- 10 N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-N<sup>2</sup>-methyl-N<sup>2</sup>-(3-methylphenyl)glycinamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-N<sup>2</sup>-(3-fluorophenyl)-N<sup>2</sup>-methylglycinamide;
- 15 N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-N<sup>2</sup>-(4-fluorophenyl)-N<sup>2</sup>-methylglycinamide;
- N<sup>2</sup>-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})-N<sup>2</sup>-methylglycinamide;
- 20 N<sup>2</sup>-(3,4-difluorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})-N<sup>2</sup>-methylglycinamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-N<sup>2</sup>-(3-methoxyphenyl)-N<sup>2</sup>-methylglycinamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-N<sup>2</sup>-(4-methoxyphenyl)-N<sup>2</sup>-methylglycinamide;
- 25 2-((3,4-difluorophenyl)amino)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})nicotinamide;
- 2-(3,4-dichlorophenoxy)-N-(cis-4-{{[4-methyl-6-(methylamino)pyrimidin-2-yl]amino}-cyclohexyl})acetamide;

- trans-2-(4-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)cyclopropanecarboxamide;
- trans-2-(3-chlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)cyclopropanecarboxamide;
- 5 trans-2-(3,4-difluorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)cyclopropanecarboxamide;
- trans-2-(3,4-dichlorophenyl)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)cyclopropanecarboxamide;
- trans-2-[3,5-bis(trifluoromethyl)phenyl]-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)cyclopropanecarboxamide;
- 10 2-yl]amino} cyclohexyl)cyclopropanecarboxamide;
- 2-[(4-chlorophenyl)sulfonyl]-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)nicotinamide;
- 2-[(3-chlorophenyl)sulfonyl]-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)nicotinamide;
- 15 2-[(4-bromophenyl)sulfonyl]-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-[[4-(trifluoromethyl)phenyl]sulfonyl] nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-[[1-methyl-3-(trifluoromethyl)-1H-pyrazol-5-yl]oxy] acetamide;
- 20 (trifluoromethyl)-1H-pyrazol-5-yl]oxy} acetamide;
- 2-[(2-chlorophenyl)sulfonyl]-N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino} cyclohexyl)nicotinamide;
- 2-[(3-chlorophenyl)sulfonyl]-N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino} cyclohexyl)nicotinamide;
- 25 3,4-dichloro-N-{cis-4-[(4-methoxy-5-methylpyrimidin-2-yl)amino]cyclohexyl}-benzamide;
- N-{cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl}-2-phenoxy-nicotinamide;



N-[cis-4-(4-dimethylamino-6-methyl-pyrimidin-2-ylamino)-cyclohexyl]-2-phenoxy-nicotinamide;

3-chloro-N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-4-fluoro-benzamide;

5 4-chloro-N-[cis-4-(4-dimethylamino-6-methyl-pyrimidin-2-ylamino)-cyclohexyl]-3-fluoro-benzamide;

3-chloro-N-[cis-4-(4-dimethylamino-6-methyl-pyrimidin-2-ylamino)-cyclohexyl]-5-fluoro-benzamide;

10 N-[cis-4-(4-dimethylamino-6-methyl-pyrimidin-2-ylamino)-cyclohexyl]-3,4,5-trifluoro-benzamide;

3-chloro-4-fluoro-N-[cis-4-(5-methyl-4-methylamino-pyrimidin-2-ylamino)-cyclohexyl]-benzamide;

4-chloro-N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-3-fluoro-benzamide;

15 3-chloro-N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-5-fluoro-benzamide;

N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-3,4,5-trifluoro-benzamide;

20 N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-3,5-difluoro-benzamide; and

2-(3,4-difluoro-phenyl)-N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-acetamide;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

25 In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)methyl]-3,5-bis(trifluoromethyl)benzamide;

N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)methyl]-3,5-

dimethoxybenzamide;

N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)methyl]-3-(trifluoromethyl)benzamide;

4-bromo-N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-methyl]-3-methylbenzamide;

3,5-dichloro-N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-methyl]benzamide;

3,4-dichloro-N-[(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-methyl]benzamide;

3,5-dichloro-N-[cis-4-({[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}methyl)-cyclohexyl]benzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-(2-fluorophenoxy)nicotinamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3,4,5-trimethoxybenzamide;

N-(4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-nitrobenzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-2,2-diphenylacetamide;

4-chloro-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-benzamide;

3-chloro-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-benzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3,4-difluorobenzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-methylbenzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-methoxybenzamide;

- N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino} cyclohexyl)-4-fluorobenzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-3-methylbenzamide;
- 5 N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-3-methoxybenzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-4-methylbenzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-3,4-
- 10 difluorobenzamide;
- 3-chloro-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-benzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-(3-methylphenoxy)nicotinamide;
- 15 2-(4-bromophenoxy)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)nicotinamide;
- 2-(4-chlorophenoxy)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-(4-
- 20 fluorophenoxy)nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-(3-fluorophenoxy)nicotinamide;
- 2-(2-bromophenoxy)-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexyl)nicotinamide;
- 25 N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-(3-methoxyphenoxy)nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-(4-methoxyphenoxy)nicotinamide;

- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-(4-iodophenoxy)nicotinamide;
- 2-(3,4-dichlorophenoxy)-N-(cis-4-{[5-methyl-4-(methylamino)pyrimidin-2-yl]amino}-cyclohexyl)acetamide;
- 5 2-(2,3-dichlorophenoxy)-N-(cis-4-{[5-methyl-4-(methylamino)pyrimidin-2-yl]amino}-cyclohexyl)acetamide;
- 2-[3,4-difluorophenyl)sulfonyl]-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)nicotinamide;
- N-[cis-4-(4-[ethyl(methyl)amino]-5-methylpyrimidin-2-yl)amino]cyclohexyl]-3,4-
- 10 difluorobenzamide;
- N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3,5-dimethoxybenzamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-(2-methoxyphenoxy)nicotinamide;
- 15 2-(2-chlorophenoxy)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)nicotinamide;
- 2-(3-chlorophenoxy)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)nicotinamide;
- 2-(3-bromophenoxy)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-
- 20 cyclohexyl)nicotinamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-[3-(trifluoromethyl)phenoxy]nicotinamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-(3-fluorophenoxy)acetamide;
- 25 N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-(3-methoxyphenoxy)acetamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-[3-(trifluoromethyl)phenoxy]acetamide;

- 2-(3-chlorophenoxy)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)acetamide;
- 2-[(5-chloropyridin-3-yl)oxy]-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)acetamide;
- 5 N-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-3,4-difluorobenzamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2-hydroxy-2-(4-methoxyphenyl)acetamide;
- 2-(2,3-difluorophenyl)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)-2-hydroxyacetamide;
- 10 cyclohexyl)-2-hydroxyacetamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2-hydroxy-2-[3-(trifluoromethyl)phenyl]acetamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2-{[2-(trifluoromethyl)phenyl]sulfinyl}acetamide;
- 15 2-[(2-chlorophenyl)sulfinyl]-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)acetamide;
- 2-[(3-bromophenyl)sulfinyl]-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)acetamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-3-
- 20 (trifluoromethyl)benzamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-3-fluorobenzamide;
- 3-bromo-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-benzamide;
- 25 N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-4-(trifluoromethoxy)benzamide;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-4-fluorobenzamide;

- 3,4-dichloro-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-benzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-3,5-bis(trifluoromethyl)benzamide;
- 5 N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-3,5-dimethoxybenzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2,4-difluorobenzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2,5-difluorobenzamide;
- 10 difluorobenzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2,3,4-trifluorobenzamide;
- 4-chloro-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-benzamide;
- 15 3-cyano-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-benzamide;
- 4-cyano-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-benzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-
- 20 (isopropylthio)nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino} cyclohexyl)-2-(propylthio)nicotinamide;
- N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino} cyclohexyl)-3-(trifluoromethyl)benzamide;
- 25 3-cyano-N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino} cyclohexyl)-benzamide;
- 4-cyano-N-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino} cyclohexyl)-benzamide;

- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-3-(trifluoromethyl)benzamide;
- 3-cyano-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-benzamide;
- 5 N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-3-methylbenzamide;
- 3-chloro-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-benzamide;
- 3-bromo-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-benzamide;
- 10 benzamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-3,5-dimethoxybenzamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-3,5-bis(trifluoromethyl)benzamide;
- 15 3,4-dichloro-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-benzamide;
- 4-cyano-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-benzamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-4-
- 20 methylbenzamide;
- N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-4-fluorobenzamide;
- 4-chloro-N-(cis-4-{{4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl}amino}cyclohexyl)-benzamide;
- 25 4-bromo-N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-benzamide;
- N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-4-(trifluoromethyl)benzamide;

- N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-3-methoxybenzamide;
- 5-bromo-N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-2-furamide;
- 5 N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-2,6-dimethoxynicotinamide;
- 4-bromo-N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-benzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-4-
- 10 (trifluoromethyl)benzamide;
- 4-bromo-N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-3-methylbenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-4-fluoro-4-methylbenzamide;
- 15 N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-4-fluoro-3-methylbenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-3-(trifluoromethoxy)benzamide;
- 5-bromo-N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-
- 20 nicotinamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-5-methylthiophene-2-carboxamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-3,5-diethoxybenzamide;
- 25 N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-3-ethoxybenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]amino} cyclohexyl)-3-isopropoxybenzamide;



- 3,5-dichloro-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl})-benzamide;
- 4-bromo-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl})-3-methylbenzamide;
- 5 N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl})-4-fluoro-3-methylbenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl})-3-fluoro-4-methylbenzamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl})-3-ethylbenzamide;
- 10 N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl})-3,5-bis(trifluoromethyl)benzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl})-3-fluoro-4-(trifluoromethyl)benzamide;
- 15 N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl})-3-fluoro-5-(trifluoromethyl)benzamide;
- 3-chloro-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl})-4-fluorobenzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl})-4-fluoro-3-methylbenzamide;
- 20 N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl})-3-fluoro-4-methylbenzamide;
- 3,5-dichloro-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl})-benzamide;
- 25 N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl})-3-(trifluoromethoxy)benzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl})-3,5-difluorobenzamide;

4-bromo-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-methylbenzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-ethylbenzamide;

- 5        4-bromo-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-benzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-4-ethylbenzamide;

- 10       N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3,5-diethoxybenzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-ethoxybenzamide;

N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-3-isopropoxybenzamide;

- 15       5-bromo-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-nicotinamide;

5-bromo-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-2-furamide;

- 20       5-chloro-N-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-2-furamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-3-fluoro-5-(trifluoromethyl)benzamide;

N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2,2-difluoro-1,3-benzodioxole-5-carboxamide;

- 25       N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-3-ethoxybenzamide;

5-bromo-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-2-furamide;

- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-3,5-diethoxybenzamide;
- 4-chloro-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-3-(trifluoromethyl)benzamide;
- 5 5-bromo-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-nicotinamide;
- 3,4-dichloro-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-benzamide;
- 3-chloro-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-4-(trifluoromethoxy)benzamide;
- 10 N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-4-methoxy-3-(trifluoromethyl)benzamide;
- N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}cyclohexyl)-4-methoxy-3-(trifluoromethyl)benzamide;
- 15 2-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)-2-methylpropanamide
- 1-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)cyclopropanecarboxamide;
- 1-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)cyclobutanecarboxamide;
- 20 cyclohexyl)cyclobutanecarboxamide;
- 1-(2,4-dichlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)cyclopropanecarboxamide;
- 2-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexyl)-2-methylpropanamide
- 25 1-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexyl)cyclopropanecarboxamide;
- 1-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexyl)cyclobutanecarboxamide;

- 1-(2,4-dichlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexyl})cyclopropanecarboxamide;
- 2-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})acetamide;
- 5 N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-1-(4-methylphenyl)cyclopropanecarboxamide;
- 2-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})propanamide
- 2-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})-2-hydroxyacetamide;
- 10 N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-1-(4-methoxyphenyl)cyclopropanecarboxamide;
- N<sup>2</sup>-(3-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})-N<sup>2</sup>-methylglycinamide;
- 15 N<sup>2</sup>-(3,4-dichlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})-N<sup>2</sup>-methylglycinamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-N<sup>2</sup>-methyl-N<sup>2</sup>-(3-methylphenyl)glycinamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-N<sup>2</sup>-(3-fluorophenyl)-N<sup>2</sup>-methylglycinamide;
- 20 N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-N<sup>2</sup>-(4-fluorophenyl)-N<sup>2</sup>-methylglycinamide;
- N<sup>2</sup>-(4-chlorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})-N<sup>2</sup>-methylglycinamide;
- 25 N<sup>2</sup>-(3,4-difluorophenyl)-N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl})-N<sup>2</sup>-methylglycinamide;
- N-(cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl})-N<sup>2</sup>-(3-methoxyphenyl)-N<sup>2</sup>-methylglycinamide;

- 2-(3,4-dichlorophenoxy)-N-(cis-4-{[4-methyl-6-(methylamino)pyrimidin-2-yl]amino}-cyclohexyl)acetamide;
- trans-2-(4-chlorophenyl)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)cyclopropanecarboxamide;
- 5 trans-2-(3-chlorophenyl)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)cyclopropanecarboxamide;
- trans-2-(3,4-difluorophenyl)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)cyclopropanecarboxamide;
- trans-2-(3,4-dichlorophenyl)-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-
- 10 amino} cyclohexyl)cyclopropanecarboxamide;
- trans-2-[3,5-bis(trifluoromethyl)phenyl]-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)cyclopropanecarboxamide;
- 2-[(4-chlorophenyl)sulfonyl]-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-
- amino} cyclohexyl)nicotinamide;
- 15 N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-2-[[1-methyl-3-(trifluoromethyl)-1H-pyrazol-5-yl]oxy]acetamide;
- N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-2-phenoxy-
- nicotinamide;
- N-[cis-4-(4-dimethylamino-6-methyl-pyrimidin-2-ylamino)-cyclohexyl]-2-phenoxy-
- 20 nicotinamide;
- 3-chloro-N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-4-fluoro-
- benzamide;
- 4-chloro-N-[cis-4-(4-dimethylamino-6-methyl-pyrimidin-2-ylamino)-cyclohexyl]-3-fluoro-
- benzamide;
- 25 3-chloro-N-[cis-4-(4-dimethylamino-6-methyl-pyrimidin-2-ylamino)-cyclohexyl]-5-fluoro-
- benzamide;
- N-[cis-4-(4-dimethylamino-6-methyl-pyrimidin-2-ylamino)-cyclohexyl]-3,4,5-trifluoro-
- benzamide;

3-chloro-4-fluoro-N-[cis-4-(5-methyl-4-methylamino-pyrimidin-2-ylamino)-cyclohexyl]-benzamide;

4-chloro-N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-3-fluoro-benzamide;

5 3-chloro-N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-5-fluoro-benzamide;

N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-3,4,5-trifluoro-benzamide;

10 N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-3,5-difluoro-benzamide; and

2-(3,4-difluoro-phenyl)-N-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexyl]-acetamide;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_1$  is selected from the group consisting of:

- 15 (i)  $C_{1-16}$  alkyl, and  
 $C_{1-16}$  alkyl substituted by substituent(s) independently selected from the group consisting of:
- carbocyclic aryl,
  - carbocyclic aryl substituted by substituent(s) independently selected from
- 20 the group consisting of:
- halogen,
  - nitro,
  - $C_{1-5}$  alkylcarbonylamino,
  - $C_{3-6}$  cycloalkylcarbonylamino,
- 25 •• $C_{1-5}$  alkyl,
- $C_{1-5}$  alkyl substituted by halogen,
  - $C_{1-5}$  alkoxy, and
  - $C_{1-5}$  alkoxy substituted by halogen,

- (ii) C<sub>3-12</sub> cycloalkyl, and  
C<sub>3-12</sub> cycloalkyl substituted by carbocyclic aryl,  
(iii) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:

•halogen,  
•C<sub>1-10</sub> alkyl,  
•C<sub>1-10</sub> alkyl substituted by halogen,  
•C<sub>1-9</sub> alkoxy, and  
•C<sub>1-5</sub> alkylthio,

- (iv) heterocyclyl,

L is Formula (XV);

Y is -C(O)NR<sub>5</sub>;

R<sub>2</sub> is selected from the group consisting of:

-N(R<sub>2a</sub>)(R<sub>2b</sub>), wherein R<sub>2a</sub> is hydrogen or C<sub>1-5</sub> alkyl and R<sub>2b</sub> is C<sub>1-5</sub> alkyl;

wherein carbocyclic aryl is phenyl or naphthyl;

heterocyclyl is 3,4-dihydro-1*H*-isoquinoliny; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

- (i) C<sub>1-16</sub> alkyl, and  
C<sub>1-16</sub> alkyl substituted by substituent(s) independently selected from the  
group consisting of:  
•carbocyclic aryl,  
•carbocyclic aryl substituted by substituent(s) independently selected from  
the group consisting of:

••halogen,

••nitro,

- C<sub>1-5</sub> alkyl,
  - C<sub>1-5</sub> alkyl substituted by halogen,
  - C<sub>1-5</sub> alkoxy, and
  - C<sub>1-5</sub> alkoxy substituted by halogen,
- 5 (ii) C<sub>3-12</sub> cycloalkyl, and  
C<sub>3-12</sub> cycloalkyl substituted by carbocyclic aryl,
- (iii) carbocyclic aryl, and  
carbocyclic aryl substituted by substituent(s) independently selected from the  
group consisting of:
- 10 •halogen,  
•C<sub>1-10</sub> alkyl,  
•C<sub>1-10</sub> alkyl substituted by halogen, and  
•C<sub>1-9</sub> alkoxy,
- R<sub>2</sub> is selected from the group consisting of:
- 15 -N(R<sub>2a</sub>)(R<sub>2b</sub>), wherein R<sub>2a</sub> is hydrogen or C<sub>1-5</sub> alkyl and R<sub>2b</sub> is C<sub>1-5</sub> alkyl;  
wherein carbocyclic aryl is phenyl or naphthyl;  
heterocyclyl is 3,4-dihydro-1*H*-isoquinoliny; and  
halogen is fluoro, chloro, bromo, or iodo;  
or a pharmaceutically acceptable salt, hydrate, or solvate thereof.
- 20 In some embodiments of the present invention, p is 1 and T is C<sub>1-5</sub> alkyl; R<sub>3</sub> and R<sub>4</sub> are both  
hydrogen; and A and B are both single bonds; R<sub>5</sub> is hydrogen; or a pharmaceutically acceptable salt,  
hydrate, or solvate thereof.
- In some embodiments, compounds of the present invention are of Formula (I) wherein the  
compound is selected from the group consisting of:
- 25 cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-N-(3-iodobenzyl)-  
cyclohexanecarboxamide;
- cis-N-(2,4-dichlorobenzyl)-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
cyclohexanecarboxamide;



- cis-N-(2,5-dichlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexanecarboxamide;
- cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-N-(4-methylbenzyl)-cyclohexanecarboxamide;
- 5 cis-N-(3,5-dichlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexanecarboxamide;
- cis-N-(3,5-dimethoxybenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexanecarboxamide;
- cis-N-(3-chlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-
- 10 cyclohexanecarboxamide;
- cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-N-[3-(trifluoromethyl)benzyl]-cyclohexanecarboxamide;
- cis-N-[3,5-bis(trifluoromethyl)benzyl]-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]-amino} cyclohexanecarboxamide;
- 15 cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-N-(3-methoxybenzyl)-cyclohexanecarboxamide;
- cis-N-(4-chlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexanecarboxamide;
- cis-N-(3,4-dichlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-
- 20 cyclohexanecarboxamide;
- cis-N-(2,5-difluorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexanecarboxamide;
- cis-N-(2,3-difluorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexanecarboxamide;
- 25 cis-N-(4-bromo-2-fluorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexanecarboxamide;
- cis-N-(2,4-difluorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-cyclohexanecarboxamide;

- cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-N-(3-methylbenzyl)-cyclohexanecarboxamide;
- cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-N-[2-(trifluoromethoxy)benzyl]-cyclohexanecarboxamide;
- 5 cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1R)-1-phenylethyl]-cyclohexanecarboxamide;
- cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1S)-1-(4-methylphenyl)ethyl]cyclohexanecarboxamide;
- cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1R)-1-(4-fluorophenyl)ethyl]cyclohexanecarboxamide;
- 10 ethyl]cyclohexanecarboxamide;
- cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1S)-1-(4-fluorophenyl)ethyl]cyclohexanecarboxamide;
- cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1R)-1-(3-methoxyphenyl)ethyl]cyclohexanecarboxamide;
- 15 cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1S)-1-(3-methoxyphenyl)ethyl]cyclohexanecarboxamide;
- cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1S)-1-(4-methoxyphenyl)ethyl]cyclohexanecarboxamide;
- cis-N-[(1R)-1-(4-chlorophenyl)ethyl]-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-
- 20 amino}cyclohexanecarboxamide;
- cis-N-[1-(4-bromophenyl)ethyl]-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexanecarboxamide;
- cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1R)-1-(4-nitrophenyl)ethyl]cyclohexanecarboxamide;
- 25 cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1S)-1-(4-nitrophenyl)ethyl]-cyclohexanecarboxamide;
- cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-(3-fluorophenyl)-cyclohexanecarboxamide;

- cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-(3-methoxyphenyl)-cyclohexanecarboxamide;
- cis-N-(3-chlorophenyl)-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-cyclohexanecarboxamide;
- 5 cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[(1S,2R)-2-phenylcyclopropyl]cyclohexanecarboxamide;
- cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[4-(trifluoromethyl)phenyl]-cyclohexanecarboxamide;
- cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-N-[(1R)-1-(3-methoxyphenyl)-
- 10 ethyl]cyclohexanecarboxamide;
- cis-N-[(1S)-1-(4-chlorophenyl)ethyl]-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}cyclohexanecarboxamide;
- cis-N-benzyl-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-cyclohexanecarboxamide;
- 15 cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-N-(4-fluorobenzyl)-cyclohexanecarboxamide;
- cis-N-(3,4-difluorobenzyl)-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-cyclohexanecarboxamide;
- cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-N-[(1S)-1-(4-methoxyphenyl)-
- 20 ethyl]cyclohexanecarboxamide;
- cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-N-[(1S)-1-(3-methoxyphenyl)-ethyl]cyclohexanecarboxamide;
- cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-N-[(1R)-1-(4-fluorophenyl)-ethyl]cyclohexanecarboxamide;
- 25 cis-N-[(1R)-1-(4-chlorophenyl)ethyl]-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}cyclohexanecarboxamide;
- cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[(1S)-1-(1-naphthyl)ethyl]-cyclohexanecarboxamide;

cis-N-[(1R)-1-(4-bromophenyl)ethyl]-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-amino} cyclohexanecarboxamide;

cis-N-[(1S)-1-(4-bromophenyl)ethyl]-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-amino} cyclohexanecarboxamide;

5 cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1S)-1-[4-(trifluoromethoxy)phenyl]ethyl] cyclohexanecarboxamide;

cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1R)-1-(2-fluorophenyl)-ethyl] cyclohexanecarboxamide;

cis-N-[(1S)-1-[3,5-bis(trifluoromethyl)phenyl]ethyl]-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexanecarboxamide;

10 4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1S)-1-[3-(trifluoromethyl)-phenyl]ethyl] cyclohexanecarboxamide;

4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1S)-1-[2-(trifluoromethyl)-phenyl]ethyl] cyclohexanecarboxamide;

15 cis-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-N-[(1R)-1-[4-(trifluoromethoxy)phenyl]ethyl] cyclohexanecarboxamide;

cis-N-[(1S)-1-(4-chlorophenyl)ethyl]-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-amino} cyclohexanecarboxamide;

cis-N-[(1R)-1-(4-chlorophenyl)ethyl]-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-amino} cyclohexanecarboxamide;

20 cis-N-[1-(4-chlorophenyl)-1-methylethyl]-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-amino} cyclohexanecarboxamide; and

cis-N-{1-[3,5-bis(trifluoromethyl)phenyl]-1-methylethyl}-4-{{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexanecarboxamide;

25 or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-N-(3-iodobenzyl)-

- cyclohexanecarboxamide;
- cis-N-(2,4-dichlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
cyclohexanecarboxamide;
- cis-N-(2,5-dichlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
5 cyclohexanecarboxamide;
- cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-N-(4-methylbenzyl)-  
cyclohexanecarboxamide;
- cis-N-(3,5-dichlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
cyclohexanecarboxamide;
- 10 cis-N-(3,5-dimethoxybenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
cyclohexanecarboxamide;
- cis-N-(3-chlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
cyclohexanecarboxamide;
- cis-N-[3,5-bis(trifluoromethyl)benzyl]-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]-  
15 amino}cyclohexanecarboxamide;
- cis-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-N-(3-methoxybenzyl)-  
cyclohexanecarboxamide;
- cis-N-(4-chlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
cyclohexanecarboxamide;
- 20 cis-N-(3,4-dichlorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
cyclohexanecarboxamide;
- cis-N-(2,5-difluorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
cyclohexanecarboxamide;
- cis-N-(2,3-difluorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
25 cyclohexanecarboxamide;
- cis-N-(4-bromo-2-fluorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-  
cyclohexanecarboxamide;
- cis-N-(2,4-difluorobenzyl)-4-{{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino}-

- cyclohexanecarboxamide;  
cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-N-(3-methylbenzyl)-  
cyclohexanecarboxamide;  
cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}-N-[2-(trifluoromethoxy)benzyl]-  
5 cyclohexanecarboxamide;  
cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[(1S)-1-(4-methylphenyl)-  
ethyl]cyclohexanecarboxamide;  
cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[(1R)-1-(4-fluorophenyl)-  
ethyl]cyclohexanecarboxamide;  
10 cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[(1R)-1-(3-methoxyphenyl)-  
ethyl]cyclohexanecarboxamide;  
cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[(1S)-1-(3-methoxyphenyl)-  
ethyl]cyclohexanecarboxamide;  
cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[(1S)-1-(4-methoxyphenyl)-  
15 ethyl]cyclohexanecarboxamide;  
cis-N-[(1R)-1-(4-chlorophenyl)ethyl]-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}-  
amino}cyclohexanecarboxamide;  
cis-N-[1-(4-bromophenyl)ethyl]-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-  
cyclohexanecarboxamide;  
20 cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[(1R)-1-(4-nitrophenyl)-  
ethyl]cyclohexanecarboxamide;  
cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-(3-methoxyphenyl)-  
cyclohexanecarboxamide;  
cis-N-(3-chlorophenyl)-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-  
25 cyclohexanecarboxamide;  
cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[(1S,2R)-2-  
phenylcyclopropyl]cyclohexanecarboxamide;  
cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-N-[4-(trifluoromethyl)phenyl]-

cyclohexanecarboxamide;

cis-N-[(1S)-1-(4-chlorophenyl)ethyl]-4-[[4-(dimethylamino)-6-methylpyrimidin-2-yl]-amino]cyclohexanecarboxamide;

cis-N-(3,4-difluorobenzyl)-4-[[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino]-

5 cyclohexanecarboxamide;

cis-4-[[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino]-N-[(1S)-1-(4-methoxyphenyl)-ethyl]cyclohexanecarboxamide;

cis-4-[[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino]-N-[(1S)-1-(3-methoxyphenyl)-ethyl]cyclohexanecarboxamide;

10 cis-N-[(1R)-1-(4-chlorophenyl)ethyl]-4-[[4-(dimethylamino)-6-methylpyrimidin-2-yl]-amino]cyclohexanecarboxamide;

cis-4-[[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino]-N-[(1S)-1-(1-naphthyl)ethyl]-cyclohexanecarboxamide;

cis-N-[(1S)-1-(4-bromophenyl)ethyl]-4-[[4-(dimethylamino)-5-methylpyrimidin-2-yl]-

15 amino]cyclohexanecarboxamide;

cis-4-[[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino]-N-[(1S)-1-[4-(trifluoromethoxy)phenyl]ethyl]cyclohexanecarboxamide;

cis-4-[[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino]-N-[(1R)-1-(2-fluorophenyl)-ethyl]cyclohexanecarboxamide;

20 cis-N-[(1S)-1-[3,5-bis(trifluoromethyl)phenyl]ethyl]-4-[[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino]cyclohexanecarboxamide;

4-[[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino]-N-[(1S)-1-[3-(trifluoromethyl)-phenyl]ethyl]cyclohexanecarboxamide;

4-[[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino]-N-[(1S)-1-[2-(trifluoromethyl)-25 phenyl]ethyl]cyclohexanecarboxamide; and

cis-N-[(1R)-1-(4-chlorophenyl)ethyl]-4-[[4-(dimethylamino)-5-methylpyrimidin-2-yl]-amino]cyclohexanecarboxamide;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, R<sub>1</sub> is selected from the group consisting of:

(i) C<sub>1-16</sub> alkyl, and

C<sub>1-16</sub> alkyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl,

•carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

••halogen,

••C<sub>1-5</sub> alkyl, and

••C<sub>1-5</sub> alkyl substituted by halogen,

(ii) C<sub>3-12</sub> cycloalkyl, and

C<sub>3-12</sub> cycloalkyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryl, and

•carbocyclic aryl substituted by halogen,

(iii) carbocyclic aryl, and

carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

•C<sub>1-10</sub> alkyl,

•C<sub>1-10</sub> alkyl substituted by halogen,

•C<sub>1-9</sub> alkoxy,

•C<sub>1-9</sub> alkoxy substituted by substituent(s) independently selected from the group consisting of:

••halogen, and

••carbocyclic aryl,

L is Formula (VII);

Y is -C(O)NR<sub>5</sub>;



$R_2$  is  $-N(R_{2a})(R_{2b})$  wherein  $R_{2a}$  is hydrogen or  $C_{1-5}$  alkyl and  $R_{2b}$  is  $C_{1-5}$  alkyl;

wherein carbocyclic aryl is phenyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

- 5 In some embodiments of the present invention,  $p$  is 1 or 2 and each  $T$  is independently  $C_{1-5}$  alkyl;  $R_3$  is hydrogen;  $R_4$  is hydrogen or  $C_{1-5}$  alkyl;  $A$  and  $B$  are both single bonds;  $R_5$  is hydrogen; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the compound is selected from the group consisting of:

- 10  $N-(3,4\text{-dimethoxyphenyl})\text{-}N'-(\text{cis-4-}\{[4-(\text{dimethylamino})\text{-}5,6\text{-dimethylpyrimidin-2-yl}]\text{-amino}\}\text{cyclohexyl})\text{urea}$ ;
- $N-(3\text{-chlorophenyl})\text{-}N'-(\text{cis-4-}\{[4-(\text{dimethylamino})\text{-}5\text{-methylpyrimidin-2-yl}]\text{amino}\}\text{cyclohexyl})\text{-}N\text{-methylurea}$ ;
- $N-(3,4\text{-dichlorophenyl})\text{-}N'-(\text{cis-4-}\{[4-(\text{dimethylamino})\text{-}5\text{-methylpyrimidin-2-yl}]\text{amino}\}\text{cyclohexyl})\text{-}N\text{-methylurea}$ ;
- 15  $N'-(\text{cis-4-}\{[4-(\text{dimethylamino})\text{-}5\text{-methylpyrimidin-2-yl}]\text{amino}\}\text{cyclohexyl})\text{-}N\text{-methyl-}N-(3\text{-methylphenyl})\text{urea}$ ;
- $N'-(\text{cis-4-}\{[4-(\text{dimethylamino})\text{-}5\text{-methylpyrimidin-2-yl}]\text{amino}\}\text{cyclohexyl})\text{-}N\text{-methyl-}N-(4\text{-methylphenyl})\text{urea}$ ;
- 20  $N'-(\text{cis-4-}\{[4-(\text{dimethylamino})\text{-}5\text{-methylpyrimidin-2-yl}]\text{amino}\}\text{cyclohexyl})\text{-}N-(3\text{-fluorophenyl})\text{-}N\text{-methylurea}$ ;
- $N'-(\text{cis-4-}\{[4-(\text{dimethylamino})\text{-}5\text{-methylpyrimidin-2-yl}]\text{amino}\}\text{cyclohexyl})\text{-}N-(4\text{-fluorophenyl})\text{-}N\text{-methylurea}$ ;
- $N-(4\text{-chlorophenyl})\text{-}N'-(\text{cis-4-}\{[4-(\text{dimethylamino})\text{-}5\text{-methylpyrimidin-2-yl}]\text{amino}\}\text{cyclohexyl})\text{-}N\text{-methylurea}$ ;
- 25  $N-(3,4\text{-difluorophenyl})\text{-}N'-(\text{cis-4-}\{[4-(\text{dimethylamino})\text{-}5\text{-methylpyrimidin-2-yl}]\text{amino}\}\text{cyclohexyl})\text{-}N\text{-methylurea}$ ;
- $N'-(\text{cis-4-}\{[4-(\text{dimethylamino})\text{-}5\text{-methylpyrimidin-2-yl}]\text{amino}\}\text{cyclohexyl})\text{-}N-(3\text{-$

methoxyphenyl)-N-methylurea;

N'-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-N-(4-methoxyphenyl)-N-methylurea;

N-{1-[3,5-bis(trifluoromethyl)phenyl]-1-methylethyl}-N'-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)urea;

N-[1-(4-chlorophenyl)-1-methylethyl]-N'-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)urea;

N-[1-(4-chlorophenyl)-1-methylethyl]-N'-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}cyclohexyl)urea;

10 N-[1-(4-chlorophenyl)-1-methylethyl]-N'-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-N-methylurea;

N-[1-(4-chlorophenyl)-1-methylethyl]-N'-(cis-4-{{4-(dimethylamino)-6-methylpyrimidin-2-yl}amino}cyclohexyl)-N-methylurea;

N-[1-(4-chlorophenyl)cyclopropyl]-N'-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-N-methylurea;

N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-N'-(2-methoxyphenyl)urea;

N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-N'-(3-methoxyphenyl)urea;

20 N-(3,4-dimethoxyphenyl)-N'-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)urea;

N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-N'-(4-fluorophenyl)urea;

N-(3,4-difluorophenyl)-N'-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)urea;

N-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}cyclohexyl)-N'-[2-(trifluoromethoxy)phenyl]urea;

N-(4-chlorophenyl)-N'-(cis-4-{{4-(dimethylamino)-5-methylpyrimidin-2-yl}amino}-

- cyclohexyl)urea;
- N-[3,5-bis(trifluoromethyl)phenyl]-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]-amino} cyclohexyl)urea;
- N-(4-bromophenyl)-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} -
- 5 cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N'-(2-methylphenyl)urea;
- N-benzyl-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)urea;
- N-[2-chloro-6-(trifluoromethyl)phenyl]-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-
- 10 2-yl]amino} cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N'-(2,4,6-trichlorophenyl)urea;
- N-(2,4-dichlorophenyl)-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} - cyclohexyl)-N-methylurea;
- 15 N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-methyl-N-[2-(trifluoromethoxy)phenyl]urea;
- N-(4-chlorophenyl)-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} - cyclohexyl)-N-ethylurea;
- N-[3,5-bis(trifluoromethyl)phenyl]-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-
- 20 yl]amino} cyclohexyl)-N-ethylurea;
- N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-(2-fluorophenyl)-N-methylurea;
- N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-ethyl-N-[2-(trifluoromethoxy)phenyl]urea;
- 25 N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-ethyl-N-phenylurea;
- N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-ethyl-N-(3-methylphenyl)urea; and

1-(2,3-dichloro-phenyl)-3-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-cyclohexylmethyl]-urea;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments, compounds of the present invention are of Formula (I) wherein the  
5 compound is selected from the group consisting of:

N<sup>1</sup>-(3,4-dimethoxyphenyl)-N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5,6-dimethylpyrimidin-2-yl]-amino}cyclohexyl)urea;

N<sup>1</sup>-(3-chlorophenyl)-N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)-N-methylurea;

10 N<sup>1</sup>-(3,4-dichlorophenyl)-N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)-N-methylurea;

N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-N-methyl-N-(3-methylphenyl)urea;

15 N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-N-methyl-N-(4-methylphenyl)urea;

N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-N-(3-fluorophenyl)-N-methylurea;

N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-N-(4-fluorophenyl)-N-methylurea;

20 N<sup>1</sup>-(4-chlorophenyl)-N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)-N-methylurea;

N<sup>1</sup>-(3,4-difluorophenyl)-N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}-cyclohexyl)-N-methylurea;

25 N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-N-(3-methoxyphenyl)-N-methylurea;

N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-N-(4-methoxyphenyl)-N-methylurea;

N-[1-(4-chlorophenyl)-1-methylethyl]-N<sup>1</sup>-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-

- yl]amino} cyclohexyl)urea;
- N-[1-(4-chlorophenyl)-1-methylethyl]-N'-(cis-4-{[4-(dimethylamino)-6-methylpyrimidin-2-yl]amino} cyclohexyl)urea;
- N-[1-(4-chlorophenyl)-1-methylethyl]-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-methylurea;
- 5 N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N'-(4-fluorophenyl)urea;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N'-(2-(trifluoromethoxy)phenyl)urea;
- 10 N-(4-bromophenyl)-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)urea;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N'-(2-methylphenyl)urea;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N'-(2,4,6-trichlorophenyl)urea;
- 15 N-(2,4-dichlorophenyl)-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-methylurea;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-methyl-N-(2-(trifluoromethoxy)phenyl)urea;
- 20 N-(4-chlorophenyl)-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-ethylurea;
- N-[3,5-bis(trifluoromethyl)phenyl]-N'-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-ethylurea;
- N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-ethyl-N-(2-phenylurea;
- 25 N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino} cyclohexyl)-N-ethyl-N-(3-methylphenyl)urea; and
- 1-(2,3-dichloro-phenyl)-3-[cis-4-(4-dimethylamino-5-methyl-pyrimidin-2-ylamino)-

cyclohexylmethyl]-urea;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_1$  is selected from the group consisting of:

heterocyclyl, and

5 heterocyclyl substituted by substituent(s) independently selected from the group consisting of:

•carbocyclic aryloxy,

•carbocyclic aryloxy substituted by substituent(s) independently selected from the group consisting of:

10 ••halogen, and

•• $C_{1-5}$  alkoxy,

L is Formula (X) or (XI);

Y is  $-C(O)-$ ;

$R_2$  is  $-N(R_{2a})(R_{2b})$  wherein  $R_{2a}$  is  $C_{1-5}$  alkyl and  $R_{2b}$  is  $C_{1-5}$  alkyl;

15 wherein carbocyclic aryl is phenyl;

heterocyclyl is pyridyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, p is 1 and T is  $C_{1-5}$  alkyl;  $R_3$  and  $R_4$  are both  
20 hydrogen; A is a single bond and B is  $-CH_2-$ ; or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention,  $R_1$  is selected from the group consisting of:

(i) carbocyclic aryl, and

25 carbocyclic aryl substituted by substituent(s) independently selected from the group consisting of:

•halogen,

• $C_{1-10}$  alkyl, and

• $C_{1-10}$  alkyl substituted by halogen,

(ii) heterocyclyl,

L is Formula (VII); and

Y is  $-S(O)_2-$ ;

$R_2$  is  $-N(R_{2a})(R_{2b})$  wherein  $R_{2a}$  is  $C_{1-5}$  alkyl and  $R_{2b}$  is  $C_{1-5}$  alkyl;

5 wherein carbocyclic aryl is phenyl or naphthyl;

heterocyclyl is furyl; and

halogen is fluoro, chloro, bromo, or iodo;

or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, p is 1 and T is  $C_{1-5}$  alkyl;  $R_3$  and  $R_4$  are both  
10 hydrogen, and A and B are both single bonds; or a pharmaceutically acceptable salt, hydrate, or  
solvate thereof.

In some embodiments, a compound of the present invention is:

4-chloro-N-(cis-4-{[4-(dimethylamino)-5-methylpyrimidin-2-yl]amino}cyclohexyl)-  
benzenesulfonamide;

15 or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

In some embodiments of the present invention, wherein  $R_1$  is selected from hydrogen,  
-CO<sub>2</sub><sup>t</sup>Bu, or -CO<sub>2</sub>Bn (Bn is a benzyl group);

$R_2$  is selected from the group consisting of:

hydrogen, halogen, hydroxy, carboxy, carbamoyl, amino,  $C_{1-5}$  alkyl,  $C_{1-5}$   
20 alkyl substituted by halogen,  $C_{1-5}$  alkyl substituted by hydroxy,  $C_{1-5}$  alkyl substituted  
by carboxy,  $C_{1-5}$  alkyl substituted by carbamoyl,  $C_{1-5}$  alkoxy,  $C_{1-5}$  alkoxy substituted  
by halogen,  $-N(R_{2a})(R_{2b})$ ;  
wherein  $R_{2a}$  is hydrogen or  $C_{1-5}$  alkyl and  $R_{2b}$  is  $C_{1-5}$  alkyl,  $C_{3-6}$  cycloalkyl, or  $C_{1-5}$  alkyl  
substituted by substituent(s) independently selected from the group consisting of:

25 •halogen,  
•hydroxy,  
•carboxy,  
•carbamoyl,

- C<sub>1-3</sub> alkoxy,
- amino,
- C<sub>3-6</sub> cycloalkyl,

or R<sub>2</sub> is methylamino or dimethylamino when Q is Formula (II);

- 5 Each T is independently selected from the group consisting of halogen, hydroxy, carboxy, carbamoyl, amino, cyano, nitro, C<sub>1-3</sub> alkyl, C<sub>1-5</sub> alkyl substituted by halogen, C<sub>1-5</sub> alkyl substituted by hydroxy, C<sub>1-5</sub> alkyl substituted by carboxy, C<sub>1-5</sub> alkyl substituted by carbamoyl, C<sub>2-5</sub> alkenyl, C<sub>2-5</sub> alkynyl, C<sub>3-6</sub> cycloalkyl, C<sub>1-5</sub> alkoxy, C<sub>1-5</sub> alkoxy substituted by halogen, carbocyclic aryl, heterocyclic, and -N(R<sub>2a</sub>)(R<sub>2b</sub>);

- 10 p is 0, 1, 2, 3, 4 or 5;

L is selected from the group consisting of Formula (VII), (X), (XI), (XV), (XVIII), or (XIX); wherein R<sub>3</sub> and R<sub>4</sub> are independently hydrogen or C<sub>1-3</sub> alkyl; and A and B are independently a single bond or -CH<sub>2</sub>-; and

Y is a single bond;

- 15 or a pharmaceutically acceptable salt, hydrate, or solvate thereof.

One aspect of the present invention pertains to pharmaceutical compositions comprising at least one compound, as described herein, in combination with a pharmaceutically acceptable carrier.

- One aspect of the present invention pertains to methods for the prophylaxis or treatment of improving memory function, sleeping and arousal, anxiety, depression, mood disorders, seizure, 20 obesity, diabetes, appetite and eating disorders, cardiovascular disease, hypertension, dyslipidemia, myocardial infarction, binge eating disorders including bulimia, anorexia, mental disorders including manic depression, schizophrenia, delirium, dementia, stress, cognitive disorders, attention deficit disorder, substance abuse disorders and dyskinesias including Parkinson's disease, epilepsy, and addiction comprising administering to an individual suffering from the condition a therapeutically 25 effective amount of a compound, as described herein, or a pharmaceutical composition thereof.

One aspect of the present invention pertains to methods for the prophylaxis or treatment of an eating disorder, obesity or an obesity related disorder comprising administering to an individual suffering from the condition a therapeutically effective amount of a compound, as described herein,



or a pharmaceutical composition thereof.

One aspect of the present invention pertains to methods for the prophylaxis or treatment of anxiety, depression, schizophrenia, addiction, or epilepsy comprising administering to an individual suffering from the condition a therapeutically effective amount of a compound, as described herein,  
5 or a pharmaceutical composition.

One aspect of the present invention pertains to compounds of the present invention, as described herein, or a pharmaceutical composition thereof, for use in a method of treatment of the human or animal body by therapy.

One aspect of the present invention pertains to compounds of the present invention, as  
10 described herein, or a pharmaceutical composition thereof, for use in a method of prophylaxis or treatment of an eating disorder, obesity or an obesity related disorder of the human or animal body by therapy.

One aspect of the present invention pertains to compounds of the present invention, as described herein, or a pharmaceutical composition thereof, for use in a method of prophylaxis or  
15 treatment of anxiety, depression, schizophrenia, addiction, or epilepsy of the human or animal body by therapy.

One aspect of the present invention pertains to compounds of the present invention, as described herein, for the manufacture of a medicament for use in the prophylaxis or treatment of an eating disorder, obesity or obesity related disorders.

20 One aspect of the present invention pertains to compounds of the present invention, as described herein, for the manufacture of a medicament for use in the prophylaxis or treatment of anxiety, depression, schizophrenia, addiction, or epilepsy.

One aspect of the present invention pertains to methods of decreasing food intake of an individual comprising administering to the individual a therapeutically effective amount of a  
25 compound, as described herein, or a pharmaceutical composition thereof.

One aspect of the present invention pertains to methods of inducing satiety in an individual comprising administering to said individual a therapeutically effective amount of a compound, as described herein, or a pharmaceutical composition thereof.

One aspect of the present invention pertains to methods of controlling or reducing weight gain in an individual comprising administering to said individual a therapeutically effective amount of a compound, as described herein, or a pharmaceutical composition thereof.

- One aspect of the present invention pertains to methods of modulating a MCH receptor in an individual comprising contacting the receptor with a compound, as described herein. In some embodiments, the compound is an antagonist. In some embodiments, the modulation of the MCH receptor is for the prophylaxis or treatment of an eating disorder, obesity or obesity related disorder. In some embodiments, the modulation of the MCH receptor reduces food intake of the individual. In some embodiments, the modulation of the MCH receptor induces satiety in the individual. In some
- 5 individual comprising contacting the receptor with a compound, as described herein. In some embodiments, the compound is an antagonist. In some embodiments, the modulation of the MCH receptor is for the prophylaxis or treatment of an eating disorder, obesity or obesity related disorder. In some embodiments, the modulation of the MCH receptor reduces food intake of the individual. In some embodiments, the modulation of the MCH receptor induces satiety in the individual. In some
- 10 embodiments, the modulation of the MCH receptor controls or reduces weight gain of the individual. In some embodiments, the modulation of the MCH receptor is for prophylaxis or treatment of anxiety, depression, schizophrenia, addiction, or epilepsy.

In some embodiments, the individual is a mammal.

In some embodiments, the mammal is a human.

- 15 In some embodiments, the human has a body mass index of about 18.5 to about 45. In some embodiments, the human has a body mass index of about 25 to about 45. In some embodiments, the human has a body mass index of about 30 to about 45. In some embodiments, the human has a body mass index of about 35 to about 45.

- One aspect of the present invention pertains to methods of producing a pharmaceutical composition comprising admixing a compound, as described herein, and a pharmaceutically acceptable carrier.
- 20 composition comprising admixing a compound, as described herein, and a pharmaceutically acceptable carrier.

- One aspect of the present invention pertains to methods for the prophylaxis or treatment of improving memory function, sleeping and arousal, anxiety, depression, mood disorders, seizure, obesity, diabetes, appetite and eating disorders, cardiovascular disease, hypertension, dyslipidemia,
- 25 myocardial infarction, binge eating disorders including bulimia, anorexia, mental disorders including manic depression, schizophrenia, delirium, dementia, stress, cognitive disorders, attention deficit disorder, substance abuse disorders and dyskinesias including Parkinson's disease, epilepsy, and addiction in mammals in need of such treatment comprising administering to the mammal a

therapeutically effective amount of a compound, as described herein, or pharmaceutical composition thereof.

- One embodiment of the invention includes any compound of the invention which selectively binds an MCH receptor, such selective binding is preferably demonstrated by a  $K_i$  for one or more other GPCR(s), preferably NPY, being at least 10-fold greater than the  $K_i$  for any particular MCH receptor, preferable MCHR1.

As used herein, the term "alkyl" is intended to denote hydrocarbon compounds including straight chain and branched chain, including for example but not limited to methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, tert-butyl, n-pentyl, isopentyl, tert-pentyl, n-hexyl, and the like.

- 10 The term "alkoxy" is intended to denote substituents of the formula -O-alkyl.

At various places in the present specification substituents of compounds of the invention are disclosed in groups. It is specifically intended that the invention include each and every individual subcombination of the members of such groups.

- G-protein coupled receptors (GPCRs) represent a major class of cell surface receptors with which many neurotransmitters interact to mediate their effects. GPCRs are predicted to have seven membrane-spanning domains and are coupled to their effectors via G-proteins linking receptor activation with intracellular biochemical sequelae such as stimulation of adenylyl cyclase. Melanin Concentrating Hormone (MCH), a cyclic peptide, has been identified as the endogenous ligand of the orphan G-protein coupled receptor SLC-1. See, for example, Shimomura et al., *Biochem. Biophys. Res. Commun.* 261, 622-26 (1999). Studies have indicated that MCH acts as a neurotransmitter/modulator/regulator to alter a number of behavioral responses.

- Mammalian MCH (19 amino acids) is highly conserved between rat, mouse, and human, exhibiting 100% amino acid identity, but its physiological roles are less clear. MCH has been reported to participate in a variety of processes including feeding, water balance, energy metabolism, general arousal/attention state, memory and cognitive functions, and psychiatric disorders. For reviews, see 1. Baker, *Int. Rev. Cytol.* 126:1-47 (1991); 2. Baker, *TEM* 5:120-126 (1994); 3. Nahon, *Critical Rev. in Neurobiol* 221:221-262, (1994); 4. Knigge et al., *Peptides* 18(7):1095-1097, (1996). The role of MCH in feeding or body weight regulation is supported by Qu et al., *Nature* 380:243-247, (1996),

demonstrating that MCH is over expressed in the hypothalamus of ob/ob mice compared with ob/+mice, and that fasting further increased MCH mRNA in both obese and normal mice during fasting. MCH also stimulated feeding in normal rats when injected into the lateral ventricles as reported by Rossi et al., *Endocrinology* 138:351-355, (1997). MCH also has been reported to

5 functionally antagonize the behavioral effects of  $\alpha$ -MSH; see: Miller et al., *Peptides* 14:1-10, (1993); Gonzalez et al, *Peptides* 17:171-177, (1996); and Sanchez et al., *Peptides* 18:3933-396, (1997). In addition, stress has been shown to increase POMC mRNA levels while decreasing the MCH precursor preproMCH (ppMCH) mRNA levels; Presse et al., *Endocrinology* 131:1241-1250, (1992). Thus MCH can serve as an integrative neuropeptide involved in the reaction to stress, as well as in the

10 regulation of feeding and sexual activity; Baker, *Int. Rev. Cytol.* 126:1-47, (1991); Knigge et al., *Peptides* 17:1063-1073, (1996).

The localization and biological activities of MCH peptide suggest that the modulation of MCH receptor activity can be useful in a number of therapeutic applications. MCH is expressed in the lateral hypothalamus, a brain area implicated in the regulation of thirst and hunger: Grillon et al.,

15 *Neuropeptides* 31:131-136, (1997); recently orexins A and B, which are potent orexigenic agents, have been shown to have very similar localization to MCH in the lateral hypothalamus; Sakurai et al., *Cell* 92:573-585 (1998). MCH mRNA levels in this brain region are increased in rats after 24 hours of food-deprivation; Herve and Fellmann, *Neuropeptides* 31:237-242 (1997); after insulin injection, a significant increase in the abundance and staining intensity of MCH immunoreactive perikarya and

20 fibres was observed concurrent with a significant increase in the level of MCH mRNA; Bahjaoui-Bouhaddi et al., *Neuropeptides* 24:251-258, (1994). Consistent with the ability of MCH to stimulate feeding in rats; Rossi et al., *Endocrinology* 138:351-355, (1997); is the observation that MCH mRNA levels are upregulated in the hypothalami of obese ob/ob mice; Qu et al., *Nature* 380:243-247, (1996); and decreased in the hypothalami of rats treated with leptin, whose food intake

25 and body weight gains are also decreased; Sahu, *Endocrinology* 139:795-798, (1998). MCH appears to act as a functional antagonist of the melanocortin system in its effects on food intake and on hormone secretion within the HPA (hypothalamopituitary/adrenal axis); Ludwig et al., *Am. J. Physiol. Endocrinol. Metab.* 274:E627-E633, (1998). Together these data suggest a role for endogenous MCH

in the regulation of energy balance and response to stress, and provide a rationale for the development of specific compounds acting at MCH receptors for use in the treatment of obesity and stress-related disorders.

Accordingly, a MCH receptor antagonist is desirable for the prophylaxis or treatment of  
5 obesity or obesity related disorders. An obesity related disorder is a disorder that has been directly or indirectly associated to obesity, such as, type II diabetes, syndrome X, impaired glucose tolerance, dyslipidaemia, hypertension, coronary heart disease and other cardiovascular disorders including atherosclerosis, insulin resistance associated with obesity and psoriasis, for treating diabetic complications and other diseases such as polycystic ovarian syndrome (PCOS), certain renal diseases  
10 including diabetic nephropathy, glomerulonephritis, glomerular sclerosis, nephrotic syndrome, hypertensive nephrosclerosis, end-stage renal diseases and microalbuminuria as well as certain eating disorders.

In species studied to date, a major portion of the neurons of the MCH cell group occupies a rather constant location in those areas of the lateral hypothalamus and subthalamus where they lie and  
15 can be a part of some of the so-called "extrapyramidal" motor circuits. These involve substantial striato- and pallidofugal pathways involving the thalamus and cerebral cortex, hypothalamic areas, and reciprocal connections to subthalamic nucleus, substantia nigra, and mid-brain centers; Bittencourt et al., J. Comp. Neurol. 319:218-245, (1992). In their location, the MCH cell group may offer a bridge or mechanism for expressing hypothalamic visceral activity with appropriate and  
20 coordinated motor activity. Clinically it can be of some value to consider the involvement of this MCH system in movement disorders, such as Parkinson's disease and Huntington's Chorea in which extrapyramidal circuits are known to be involved.

Human genetic linkage studies have located authentic hMCH loci on chromosome 12 (12q23-24) and the variant hMCH loci on chromosome 5 (5q12-13) (Pedetour et al., 1994). Locus  
25 12q23-24 coincides with a locus to which autosomal dominant cerebellar ataxia type II (SCA2) has been mapped; Auburger et al., Cytogenet. Cell. Genet. 61:252-256, (1992); Twells et al., Cytogenet. Cell. Genet. 61:262-265, (1992). This disease comprises neurodegenerative disorders, including an olivopontocerebellar atrophy. Furthermore, the gene for Darier's disease, has been mapped to locus

12q23-24; Craddock et al., Hum. Mol. Genet. 2:1941-1943, (1993). Darier's disease is characterized by abnormalities I keratinocyte adhesion and mental illnesses in some families. In view of the functional and neuroanatomical patterns of the MCH neural system in the rat and human brains, the MCH gene can represent a good candidate for SCA2 or Darier's disease. Interestingly, diseases with high social impact have been mapped to this locus. Indeed, the gene responsible for chronic or acute forms of spinal muscular atrophies has been assigned to chromosome 5q12-13 using genetic linkage analysis; Melki et al., Nature (London) 344:767-768, (1990); Westbrook et al., Cytogenet. Cell. Genet. 61:225-231, (1992). Furthermore, independent lines of evidence support the assignment of a major schizophrenia locus to chromosome 5q11.2-13.3; Sherrington et al., Nature (London) 336:164-167, (1988); Bassett et al., Lancet 1:799-801, (1988); Gilliam et al., Genomics 5:940-944, (1989). The above studies suggest that MCH can play a role in neurodegenerative diseases and disorders of emotion.

Additional therapeutic applications for MCH-related compounds are suggested by the observed effects of MCH in other biological systems. For example, MCH can regulate reproductive functions in male and female rats. MCH transcripts and MCH peptide were found within germ cells in testes of adult rats, suggesting that MCH can participate in stem cell renewal and/or differentiation of early spermatocytes; Hervieu et al., Biology of Reduction 54:1161-1172, (1996). MCH injected directly into the medial preoptic area (MPOA) or ventromedial nucleus (VMN) stimulated sexual activity in female rats; Gonzalez et al., Peptides 17:171-177, (1996). In ovariectomized rats primed with estradiol, MCH stimulated luteinizing hormone (LH) release while anti-MCH antiserum inhibited LH release; Gonzalez et al., Neuroendocrinology 66:254-262, (1997). The zona incerta, which contains a large population of MCH cell bodies, has previously been identified as a regulatory site for the pre-ovulatory LH surge; MacKenzie et al., Neuroendocrinology 39:289-295, (1984). MCH has been reported to influence release of pituitary hormones including ACTH and oxytocin. MCH analogues can also be useful in treating epilepsy. In the PTZ seizure model, injection of MCH prior to seizure induction prevented seizure activity in both rats and guinea pigs, suggesting that MCH-containing neurons can participate in the neural circuitry underlying PTZ-induced seizure; Knigge and Wagner, Peptides 18:1095-1097, (1997). MCH has also been observed to affect

behavioral correlates of cognitive functions. MCH treatment hastened extinction of the passive avoidance response in rats; McBride et al., *Peptides* 15:757-759, (1994); raising the possibility that MCH receptor antagonists can be beneficial for memory storage and/or retention. A possible role for MCH in the modulation or perception of pain is supported by the dense innervation of the periaqueductal grey (PAG) by MCH-positive fibers. Finally, MCH can participate in the regulation of fluid intake. ICV infusion of MCH in conscious sheep produced diuretic, natriuretic, and kaliuretic changes in response to increased plasma volume; Parkes, *J. Neuroendocrinol.* 8:57-63, (1996). Together with anatomical data reporting the presence of MCH in fluid regulatory areas of the brain, the results indicate that MCH can be an important peptide involved in the central control of fluid homeostasis in mammals.

In a recent citation MCHR1 antagonists surprisingly demonstrated their use as anti-depressants and/or anti-anxiety agents. MCHR1 antagonists have been reported to show antidepressant and anxiolytic activities in rodent models, such as, social interaction, forced swimming test and ultrasonic vocalization. Therefore, MCHR1 antagonists could be useful to independently treat subjects with depression and/or anxiety. Also, MCHR1 antagonists could be useful to treat subjects that suffer from depression and/or anxiety and obesity.

This invention provides a method of treating an abnormality in a subject wherein the abnormality is alleviated by decreasing the activity of a mammalian MCH1 receptor which comprises administering to the subject an amount of a compound which is a mammalian MCH1 receptor antagonist effective to treat the abnormality. In separate embodiments, the abnormality is a regulation of a steroid or pituitary hormone disorder, an epinephrine release disorder, an anxiety disorder, a gastrointestinal disorder, a cardiovascular disorder, an electrolyte balance disorder, hypertension, diabetes, a respiratory disorder, asthma, a reproductive function disorder, an immune disorder, an endocrine disorder, a musculoskeletal disorder, a neuroendocrine disorder, a cognitive disorder, a memory disorder, a sensory modulation and transmission disorder, a motor coordination disorder, a sensory integration disorder, a motor integration disorder, a dopaminergic function disorder, a sensory transmission disorder, an olfaction disorder, a sympathetic innervation disorder, an affective disorder, a stress-related disorder, a fluid-balance disorder, a seizure disorder, pain, psychotic behavior,

morphine tolerance, opiate addiction or migraine.

Compositions of the invention can conveniently be administered in unit dosage form and can be prepared by any of the methods well known in the pharmaceutical art, for example, as described in *Remington's Pharmaceutical Sciences* (Mack Pub. Co., Easton, PA, 1980).

- 5       The compounds of the invention can be employed as the sole active agent in a pharmaceutical or can be used in combination with other active ingredients which could facilitate the therapeutic effect of the compound.

- Compounds of the present invention or a solvate or physiologically functional derivative thereof can be used as active ingredients in pharmaceutical compositions, specifically as a MCH  
10   receptor antagonists. By the term "active ingredient" is defined in the context of a "pharmaceutical composition" and shall mean a component of a pharmaceutical composition that provides the primary pharmaceutical benefit, as opposed to an "inactive ingredient" which would generally be recognized as providing no pharmaceutical benefit. The term "pharmaceutical composition" shall mean a composition comprising at one active ingredient and at least one ingredient that is not an active  
15   ingredient (for example and not limitation, a filler, dye, or a mechanism for slow release), whereby the composition is amenable to use for a specified, efficacious outcome in a mammal (for example, and not limitation, a human).

- Pharmaceutical compositions, including, but not limited to, pharmaceutical compositions, comprising at least one compound of the present invention and/or an acceptable salt or solvate thereof  
20   (e.g., a pharmaceutically acceptable salt or solvate) as an active ingredient combined with at least one carrier or excipient (e.g., pharmaceutical carrier or excipient) can be used in the treatment of clinical conditions for which a MCH receptor antagonist is indicated. At least one compound of the present invention can be combined with the carrier in either solid or liquid form in a unit dose formulation. The pharmaceutical carrier must be compatible with the other ingredients in the composition and must  
25   be tolerated by the individual recipient. Other physiologically active ingredients can be incorporated into the pharmaceutical composition of the invention if desired, and if such ingredients are compatible with the other ingredients in the composition. Formulations can be prepared by any suitable method, typically by uniformly mixing the active compound(s) with liquids or finely divided solid carriers, or



both, in the required proportions, and then, if necessary, forming the resulting mixture into a desired shape.

Conventional excipients, such as binding agents, fillers, acceptable wetting agents, tableting lubricants, and disintegrants can be used in tablets and capsules for oral administration. Liquid  
5 preparations for oral administration can be in the form of solutions, emulsions, aqueous or oily suspensions, and syrups. Alternatively, the oral preparations can be in the form of dry powder that can be reconstituted with water or another suitable liquid vehicle before use. Additional additives such as suspending or emulsifying agents, non-aqueous vehicles (including edible oils), preservatives, and flavorings and colorants can be added to the liquid preparations. Parenteral dosage forms can be  
10 prepared by dissolving the compound of the invention in a suitable liquid vehicle and filter sterilizing the solution before filling and sealing an appropriate vial or ampoule. These are just a few examples of the many appropriate methods well known in the art for preparing dosage forms.

It is noted that when the MCH receptor antagonists are utilized as active ingredients in a pharmaceutical composition, these are not intended for use only in humans, but in other non-human  
15 mammals as well. Indeed, recent advances in the area of animal health-care mandate that consideration be given for the use of MCH receptor antagonists for the treatment of obesity in domestic animals (e.g., cats and dogs), and MCH receptor antagonists in other domestic animals where no disease or disorder is evident (e.g., food-oriented animals such as cows, chickens, fish, etc.). Those of ordinary skill in the art are readily credited with understanding the utility of such compounds  
20 in such settings.

Pharmaceutically acceptable salts of the compounds of the invention can be prepared by reacting the free acid or base forms of these compounds with the appropriate base or acid in water, in an organic solvent, or in a mixture of the two; generally, nonaqueous media like ether, ethyl acetate, ethanol, isopropanol, dioxane, or acetonitrile are preferred. For instance, when the compound (I)  
25 possesses an acidic functional group, it can form an inorganic salt such as an alkali metal salt (e.g., sodium salt, potassium salt, etc.), an alkaline earth metal salt (e.g. calcium salt, magnesium salt, barium salt, etc.), and an ammonium salt. When the compound (I) possesses a basic functional group, it can form an inorganic salt (e.g., hydrochloride, sulfate, phosphate, hydrobromate, etc.) or an organic

salt (e.g., acetate, maleate, fumarate, succinate, methanesulfonate, p-toluenesulfonate, citrate, tartrate, etc.).

#### Other Utilities

- 5 Another object of the present invention relates to radiolabelled compounds of Formula (Ia) that would be useful not only in radio-imaging but also in assays, both in vitro and in vivo, for localizing and quantitating MCH in tissue samples, including human, and for identifying MCH ligands by inhibition binding of a radiolabelled compound. It is a further object of this invention to develop novel MCH assays of which comprise such radiolabelled compounds.
- 10 Suitable radionuclides that can be incorporated in compounds of the present invention include but are not limited to  $^3\text{H}$  (also written as T),  $^{11}\text{C}$ ,  $^{14}\text{C}$ ,  $^{18}\text{F}$ ,  $^{125}\text{I}$ ,  $^{82}\text{Br}$ ,  $^{123}\text{I}$ ,  $^{124}\text{I}$ ,  $^{125}\text{I}$ ,  $^{131}\text{I}$ ,  $^{75}\text{Br}$ ,  $^{76}\text{Br}$ ,  $^{15}\text{O}$ ,  $^{13}\text{N}$ ,  $^{35}\text{S}$  and  $^{77}\text{Br}$ . The radionuclide that is incorporated in the instant radiolabelled compounds will depend on the specific application of that radiolabelled compound. Thus, for in vitro MCH labeling and competition assays, compounds that incorporate  $^3\text{H}$ ,  $^{14}\text{C}$ ,  $^{125}\text{I}$ ,  $^{131}\text{I}$ ,  $^{35}\text{S}$  or  $^{82}\text{Br}$  will generally be
- 15 most useful. For radio-imaging applications  $^{11}\text{C}$ ,  $^{18}\text{F}$ ,  $^{125}\text{I}$ ,  $^{123}\text{I}$ ,  $^{124}\text{I}$ ,  $^{131}\text{I}$ ,  $^{75}\text{Br}$ ,  $^{76}\text{Br}$  or  $^{77}\text{Br}$  will generally be most useful.

- It is understood that a "radio-labelled" or "labelled compound" is a compound of Formula (Ia) that has incorporated at least one radionuclide; in some embodiments the radionuclide is selected from the group consisting of  $^3\text{H}$ ,  $^{14}\text{C}$ ,  $^{125}\text{I}$ ,  $^{35}\text{S}$  and  $^{82}\text{Br}$ ; in some embodiments the radionuclide  $^3\text{H}$  or
- 20  $^{14}\text{C}$ . Moreover, it should be understood that all of the atoms represented in the compounds of the invention can be either the most commonly occurring isotope of such atoms or the more scarce radio-isotope or nonradio-active isotope.

- Synthetic methods for incorporating radio-isotopes into organic compounds including those applicable to those compounds of the invention are well known in the art and include incorporating
- 25 activity levels of tritium into target molecules include: A. Catalytic Reduction with Tritium Gas - This procedure normally yields high specific activity products and requires halogenated or unsaturated precursors. B. Reduction with Sodium Borohydride [ $^3\text{H}$ ] - This procedure is rather inexpensive and requires precursors containing reducible functional groups such as aldehydes, ketones, lactones, esters,

- and the like. C. Reduction with Lithium Aluminum Hydride [ $^3\text{H}$ ] - This procedure offers products at almost theoretical specific activities. It also requires precursors containing reducible functional groups such as aldehydes, ketones, lactones, esters, and the like. D. Tritium Gas Exposure Labeling - This procedure involves exposing precursors containing exchangeable protons to tritium gas in the presence of a suitable catalyst. E. N-Methylation using Methyl Iodide [ $^3\text{H}$ ] - This procedure is usually employed to prepare O-methyl or N-methyl ( $^3\text{H}$ ) products by treating appropriate precursors with high specific activity methyl iodide ( $^3\text{H}$ ). This method in general allows for high specific activity, such as about 80-87 Ci/mmol.

Synthetic methods for incorporating activity levels of  $^{125}\text{I}$  into target molecules include: A.

- 10 Sandmeyer and like reactions - This procedure transforms an aryl or heteroaryl amine into a diazonium salt, such as a tetrafluoroborate salt, and subsequently to  $^{125}\text{I}$  labelled compound using  $\text{Na}^{125}\text{I}$ . A represented procedure was reported by Zhu, D.-G. and co-workers in *J. Org. Chem.* **2002**, 67, 943-948. B. Ortho  $^{125}\text{I}$ iodination of phenols - This procedure allows for the incorporation of  $^{125}\text{I}$  at the ortho position of a phenol as reported by Collier, T. L. and co-workers in *J. Labelled Compd Radiopharm.* **1999**, 42, S264-S266. C. Aryl and heteroaryl bromide exchange with  $^{125}\text{I}$  - This method is generally a two step process. The first step is the conversion of the aryl or heteroaryl bromide to the corresponding tri-alkyltin intermediate using for example, a Pd catalyzed reaction [i.e.  $\text{Pd}(\text{Ph}_3\text{P})_4$ ] or through an aryl or heteroaryl lithium, in the presence of a tri-alkyltinhalide or hexaalkyliditin [e.g.,  $(\text{CH}_3)_3\text{SnSn}(\text{CH}_3)_3$ ]. A represented procedure was reported by Bas, M.-D. and co-workers in *J. Labelled Compd Radiopharm.* **2001**, 44, S280-S282.

- A radiolabelled MCH compound of Formula (I) can be used in a screening assay to identify/evaluate compounds. In general terms, a newly synthesized or identified compound (i.e., test compound) can be evaluated for its ability to reduce binding of the "radiolabelled compound of Formula (Ia)" to the MCH receptor. Accordingly, the ability of a test compound to compete with the "radio-labelled compound of Formula (Ia)" for the binding to the MCH receptor directly correlates to its binding affinity.

The labelled compounds of the present invention bind to the MCH receptor. In one embodiment the labelled compound has an  $\text{IC}_{50}$  less than about 500  $\mu\text{M}$ , in another embodiment the

labelled compound has an  $IC_{50}$  less than about 100  $\mu M$ , in yet another embodiment the labelled compound has an  $IC_{50}$  less than about 10  $\mu M$ , in yet another embodiment the labelled compound has an  $IC_{50}$  less than about 1  $\mu M$ , and in still yet another embodiment the labelled inhibitor has an  $IC_{50}$  less than about 0.1  $\mu M$ .

5

### Preparation of Compound of Formula (I) - General synthetic methods

The novel substituted quinolines, tetrahydroquinazolines, and pyrimidines of the present invention can be readily prepared according to a variety of synthetic manipulations, all of which would be familiar to one skilled in the art. Preferred methods for the preparation of compounds of the present

10 invention include, but are not limited to, those described in Scheme 1-24.

The common intermediate (F) of the novel substituted quinolines can be prepared as shown in Scheme 1. Commercially available 2,4-dihydroxyquinoline (A), wherein T and p is as defined above, is converted to 2,4-dihalo-quinoline (B) by a halogenating agent with or without a base (wherein X is halogen such as chloro, bromo, or iodo). The halogenating agent includes phosphorous oxychloride  
15  $(POCl_3)$ , phosphorous oxybromide  $(POBr_3)$ , or phosphorus pentachloride  $(PCl_5)$ . The base includes a tertiary amine (preferably *N,N*-diisopropylethylamine, etc.) or an aromatic amine (preferably *N,N*-dimethylaniline, etc.). Reaction temperature ranges from about 100°C to 200°C, preferably about 140°C to 180°C.

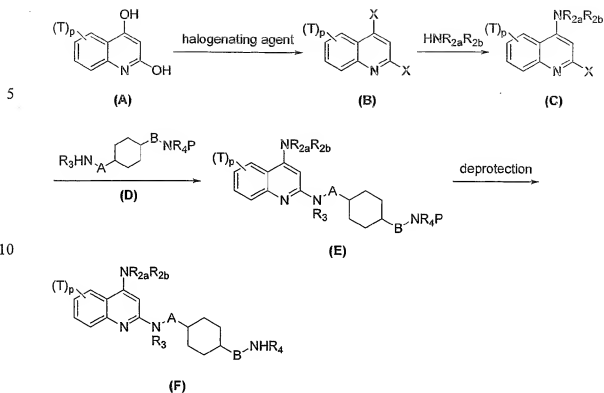
The halogen of 4-position of 2,4-dihalo-quinoline (B) is selectively substituted by a primary  
20 or secondary amine  $(HNR_{2a}R_{2b})$ , wherein  $R_{2a}$  and  $R_{2b}$  are as defined above) with or without a base in an inert solvent to provide the corresponding 4-substituted amino adduct (C). The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydroxide (preferably sodium hydroxide, etc.), or a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylnmorpholine, etc.). The inert solvent includes

25 lower alkyl alcohol solvents (preferably methanol, ethanol, 2-propanol, or butanol, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane, etc.), or amide solvents (preferably *N,N*-dimethylformamide or 1-methyl-pyrrolidin-2-one, etc.). Reaction temperature ranges from about 0°C to 200°C, preferably about 10°C to 150°C.

In turn, this is substituted by the mono-protected diamine (D), wherein R<sub>3</sub>, R<sub>4</sub>, A, and B are as defined above and P is a protective group, with or without a base in an inert solvent to provide 2,4-disubstituted amino quinoline (E). The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydroxide (preferably sodium hydroxide, etc.), or a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.). The inert solvent includes lower alkyl alcohol solvents (preferably methanol, ethanol, 2-propanol, or butanol, etc.) or amide solvents (preferably *N,N*-dimethylformamide or 1-methyl-pyrrolidin-2-one, etc.). Reaction temperature ranges from about 50°C to 200°C, preferably about 80°C to 150°C. Also this reaction can be carried out under microwave conditions.

Representative protecting groups suitable for a wide variety of synthetic transformations are disclosed in Greene and Wuts, *Protective Groups in Organic Synthesis*, second edition, John Wiley & Sons, New York, 1991, the disclosure of which is incorporated herein by reference in its entirety. The deprotection of the protective group leads to the common intermediate (F) of the novel substituted quinolines.

## Scheme 1



The conversion of the common intermediate (F) to the novel substituted quinolines (G-K) of the present invention is outlined in Scheme 2.

The amine (F) is reacted with a carboxylic acid ( $\text{R}_1\text{CO}_2\text{H}$ ) and a dehydrating condensing agent in an inert solvent with or without a base to provide the novel amide (G) of the present invention.

- 20 The dehydrating condensing agent includes dicyclohexylcarbodiimide (DCC), 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride (EDC·HCl), bromo-tris-pyrrolidino-phosmium hexafluorophosphate (PyBroP), *O*-(7-azabenzotriazol-1-yl)-1,1,3,3-tetramethyluronium hexafluorophosphate (HATU), or 1-cyclohexyl-3-methylpolystyrene-carbodiimide. The base includes a tertiary amine (preferably *N,N*-diisopropylethylamine or triethylamine, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), nitrile solvents (preferably acetonitrile, etc.), or amide solvents (preferably *N,N*-dimethylformamide, etc.). In case of need, 1-hydroxybenzotriazole (HOBT),
- 25

HOBT-6-carboxamidomethyl polystyrene, or 1-hydroxy-7-azabenzotriazole (HOAT) can be used as a reactant agent. Reaction temperature ranges from about -20°C to 50°C, preferably about 0°C to 40°C.

- Alternatively, the novel amide (G) of the present invention can be obtained by amidation
- 5 reaction using an acid chloride ( $R_1\text{COCl}$ ) and a base in an inert solvent. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic
- 10 amine (preferably pyridine, imidazole, poly-(4-vinylpyridine), etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), amide solvents (preferably *N,N*-dimethylformamide, etc.), or aromatic solvents (preferably toluene or pyridine, etc.). Reaction temperature ranges from about -20°C to 50°C, preferably about 0°C to 40°C.

- 15 The novel amide (G) of the present invention is reacted with a reducing agent in an inert solvent to provide the novel amine (H) of the present invention. The reducing agent includes alkali metal aluminum hydrides (preferably lithium aluminum hydride), alkali metal borohydrides (preferably lithium borohydride), alkali metal trialkoxyaluminum hydrides (preferably lithium tri-*tert*-butoxyaluminum hydride), dialkylaluminum hydrides (preferably di-isobutylaluminum
- 20 hydride), borane, dialkylboranes (preferably di-isoamyl borane), alkali metal trialkylboron hydrides (preferably lithium triethylboron hydride). The inert solvent includes ethereal solvents (preferably tetrahydrofuran or dioxane) or aromatic solvents (preferably toluene, etc.). Reaction temperature ranges from about -78°C to 200°C, preferably about 50°C to 120°C.

- Alternatively, the novel amine (H) of the present invention can be obtained by reductive
- 25 amination reaction using aldehyde ( $R_1\text{CHO}$ ) and a reducing agent in an inert solvent with or without an acid. The reducing agent includes sodium triacetoxyborohydride, sodium cyanoborohydride, sodium borohydride, or boran-pyridine complex, preferably sodium triacetoxyborohydride or sodium cyanoborohydride. The inert solvent includes lower alkyl alcohol solvents (preferably methanol or

ethanol, etc.), lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), or aromatic solvents (preferably toluene, etc.). The acid includes an inorganic acid (preferably hydrochloric acid or sulfuric acid) or an organic acid (preferably acetic acid). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C. Also this reaction can be carried out under microwave conditions.

The novel urea (I) of the present invention can be obtained by urea reaction using an isocyanate ( $R_1\text{NCO}$ ) in an inert solvent with or without a base. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine or imidazole, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or polar solvents (preferably *N,N*-dimethylformamide or dimethyl sulfoxide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

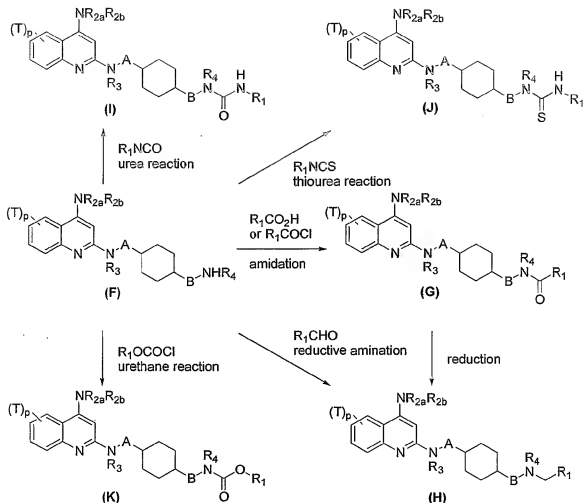
The amine (F) is reacted with a isothiocyanate ( $R_1\text{NCS}$ ) in an inert solvent with or without a base to provide the novel thiourea (J) of the present invention. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine or imidazole, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or amide solvents (preferably *N,N*-dimethylformamide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

The novel urethane (K) of the present invention can be obtained by urethane reaction using



$R_1\text{OCOX}$ , wherein X is halogen such as chloro, bromo, or iodo, in an inert solvent with or without a base. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine, imidazole, or poly-(4-vinylpyridine), etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or polar solvents (preferably *N,N*-dimethylformamide or dimethyl sulfoxide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

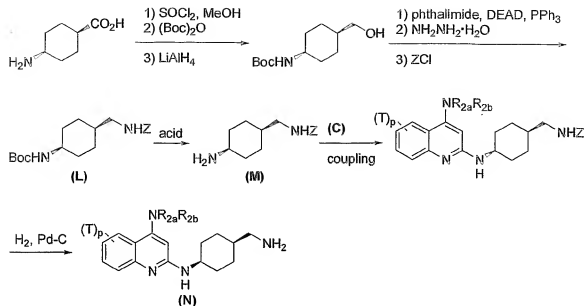
## Scheme 2



Compounds of Formula (N) can be prepared as shown in Scheme 3.

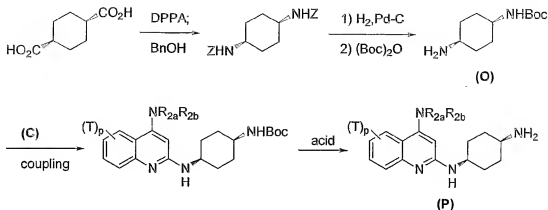
[4-(Benzyloxycarbonylamino-methyl)-cyclohexyl]-carbamic acid *tert*-butyl ester (L) is synthesized by the method which is described in WO 01/72710. The deprotection of Boc-group is achieved by an acid to give the amine (M). The coupling of the amine with quinoline core (C), which is synthesized as scheme 1, gives 2,4-disubstituted amino quinoline. The deprotection of Z-group is achieved by hydrogen reduction to give compounds of Formula (N).

### Scheme 3



Compounds of Formula (P) can be prepared as shown in Scheme 4. The dicarboxylic acid of commercially available *cis*-cyclohexane-1,4-dicarboxylic acid is transformed to dibenzyl carbamate by curtius rearrangement. The deprotection of Z-group is achieved by hydrogen reduction to give the diamine. The mono-protection of the diamine can be achieved by the method described in *Synthetic communications*, 20, 2559-2564 (1990) to give the compound (O). The coupling of the amine with quinoline core (C), which is synthesized as scheme 1, gives 2,4-disubstituted amino quinoline. The deprotection of Boc-group is achieved by an acid to give the amine (P).

## Scheme 4



The common intermediate (V) of the novel substituted tetrahydroquinazolines can be prepared as shown in Scheme 5. Commercially available ethyl 2-cyclohexanonecarboxylate (Q), wherein T and p is as defined above, is transformed to 2,4-dihydroxytetrahydroquinazoline (R) according to the method described in EP 0604920. 2,4-Dihydroxytetrahydroquinazoline (R) is converted to 2,4-dihalo-tetrahydroquinazoline (S) by a halogenating agent with or without a base (wherein X is halogen such as chloro, bromo, or iodo). The halogenating agent includes phosphorous oxychloride (POCl<sub>3</sub>), phosphorous oxybromide (POBr<sub>3</sub>), or phosphorus pentachloride (PCl<sub>5</sub>). The base includes a tertiary amine (preferably *N,N*-diisopropylethylamine, etc.) or an aromatic amine (preferably *N,N*-dimethylaniline, etc.). Reaction temperature ranges from about 100°C to 200°C, preferably about 140°C to 180°C.

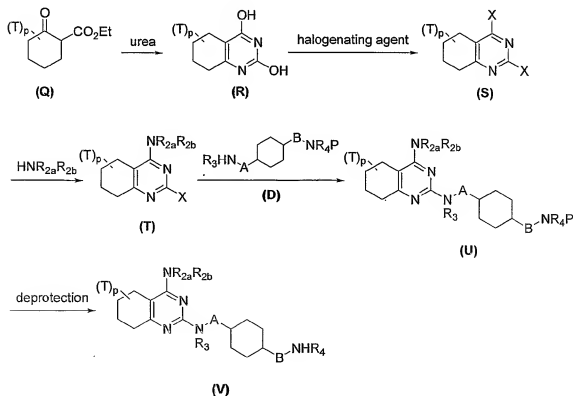
The halogen of 4-position of 2,4-dihalo-tetrahydroquinazoline (S) is selectively substituted by a primary or secondary amine (HNR<sub>2a</sub>R<sub>2b</sub>, wherein R<sub>2a</sub> and R<sub>2b</sub> are as defined above) with or without a base in an inert solvent to provide the corresponding 4-substituted amino adduct (T). The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydroxide (preferably sodium hydroxide, etc.), or a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.). The inert solvent includes lower alkyl alcohol solvents (preferably methanol, ethanol, 2-propanol, or butanol, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane, etc.), or amide solvents (preferably

*N,N*-dimethylformamide or 1-methyl-pyrrolidin-2-one, etc.). Reaction temperature ranges from about 0°C to 200°C, preferably about 10°C to 150°C.

- In turn, this is substituted by the mono-protected diamine (D), wherein R<sub>3</sub>, R<sub>4</sub>, A, and B are as defined above and P is a protective group, with or without a base in an inert solvent to provide
- 5 2,4-disubstituted amino tetrahydroquinazoline (U). The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydroxide (preferably sodium hydroxide, etc.), or a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.). The inert solvent includes lower alkyl alcohol solvents (preferably methanol, ethanol, 2-propanol, or butanol, etc.) or amide solvents (preferably
- 10 *N,N*-dimethylformamide or 1-methyl-pyrrolidin-2-one, etc.). Reaction temperature ranges from about 50°C to 200°C, preferably about 80°C to 150°C. Also this reaction can be carried out under microwave conditions.

The deprotection of the protective group leads to the common intermediate (V) of the novel substituted tetrahydroquinazolines.

### Scheme 5



The conversion of the common intermediate (V) to the novel substituted tetrahydroquinazolines (W-A') of the present invention is outlined in Scheme 6.

- The amine (V) is reacted with a carboxylic acid ( $R_1CO_2H$ ) and a dehydrating condensing agent in an inert solvent with or without a base to provide the novel amide (W) of the present invention. The dehydrating condensing agent includes dicyclohexylcarbodiimide (DCC), 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride (EDC·HCl), bromo-tris-pyrrolidino-phosonium hexafluorophosphate (PyBroP), *O*-(7-azabenzotriazol-1-yl)-1,1,3,3-tetramethyluronium hexafluorophosphate (HATU), or 1-cyclohexyl-3-methylpolystyrene-carbodiimide. The base includes a tertiary amine (preferably *N,N*-diisopropylethylamine or triethylamine, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), nitrile solvents (preferably acetonitrile, etc.), or amide solvents (preferably *N,N*-dimethylformamide, etc.). In case of need, 1-hydroxybenzotriazole (HOBT), HOBT-6-carboxamidomethyl polystyrene, or 1-hydroxy-7-azabenzotriazole (HOAT) can be used as a reactant agent. Reaction temperature ranges from about -20°C to 50°C, preferably about 0°C to 40°C.

- Alternatively, the novel amide (W) of the present invention can be obtained by amidation reaction using an acid chloride ( $R_1COCl$ ) and a base in an inert solvent. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine, imidazole, poly-(4-vinylpyridine), etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), amide solvents (preferably *N,N*-dimethylformamide, etc.), or aromatic solvents (preferably toluene or pyridine, etc.). Reaction temperature ranges from about -20°C to 50°C, preferably about 0°C to 40°C.

The novel amide (W) of the present invention is reacted with a reducing agent in an inert solvent to provide the novel amine (X) of the present invention. The reducing agent includes alkali metal aluminum hydrides (preferably lithium aluminum hydride), alkali metal borohydrides (preferably lithium borohydride), alkali metal trialkoxyaluminum hydrides (preferably lithium tri-*tert*-butoxyaluminum hydride), dialkylaluminum hydrides (preferably di-isobutylaluminum hydride), borane, dialkylboranes (preferably di-isooamyl borane), alkali metal trialkylboron hydrides (preferably lithium triethylboron hydride). The inert solvent includes ethereal solvents (preferably tetrahydrofuran or dioxane) or aromatic solvents (preferably toluene, etc.). Reaction temperature ranges from about -78°C to 200°C, preferably about 50°C to 120°C.

- 10 Alternatively, the novel amine (X) of the present invention can be obtained by reductive amination reaction using aldehyde ( $R_1CHO$ ) and a reducing agent in an inert solvent with or without an acid. The reducing agent includes sodium triacetoxymethylborohydride, sodium cyanoborohydride, sodium borohydride, or boran-pyridine complex, preferably sodium triacetoxymethylborohydride or sodium cyanoborohydride. The inert solvent includes lower alkyl alcohol solvents (preferably methanol or
- 15 ethanol, etc.), lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), or aromatic solvents (preferably toluene, etc.). The acid includes an inorganic acid (preferably hydrochloric acid or sulfuric acid) or an organic acid (preferably acetic acid). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C. Also this reaction can be carried out under microwave conditions.

- 20 The novel urea (Y) of the present invention can be obtained by urea reaction using an isocyanate ( $R_1NCO$ ) in an inert solvent with or without a base. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine
- 25 (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine or imidazole, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or polar solvents

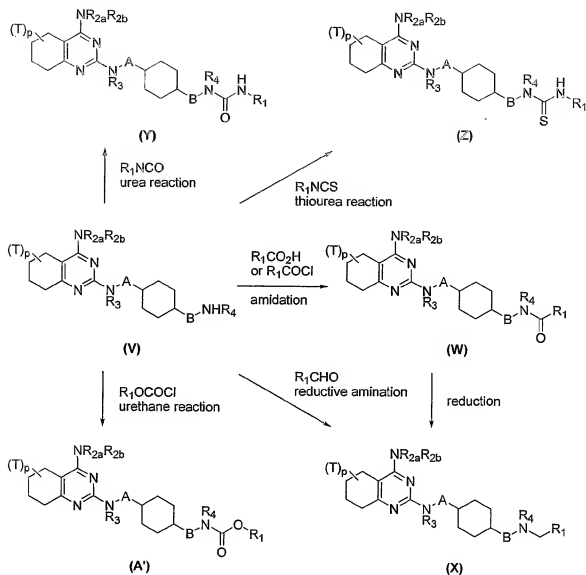
(preferably *N,N*-dimethylformamide or dimethyl sulfoxide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

- The amine (V) is reacted with an isothiocyanate ( $R_1\text{NCS}$ ) in an inert solvent with or without a base to provide the novel thiourea (Z) of the present invention. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine or imidazole, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or amide solvents (preferably *N,N*-dimethylformamide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

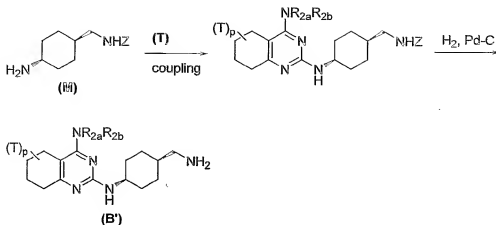
- The novel urethane (A') of the present invention can be obtained by urethane reaction using  $R_1\text{OCOX}$ , wherein X is halogen such as chloro, bromo, or iodo, in an inert solvent with or without a base. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine, imidazole, or poly-(4-vinylpyridine), etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or polar solvents (preferably *N,N*-dimethylformamide or dimethyl sulfoxide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.



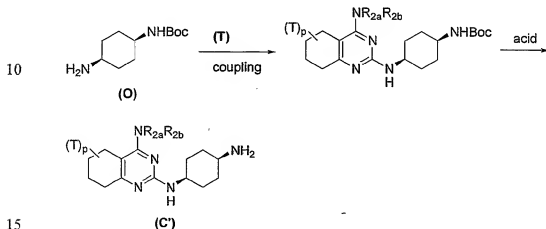
## Scheme 6



Compounds of Formula (B') can be prepared as shown in Scheme 7. The coupling of the amine (M), which is synthesized as scheme 3, with tetrahydroquinazoline core (T), which is  
 5 synthesized as scheme 5, gives 2,4-disubstituted amino tetrahydroquinazoline. The deprotection of Z-group is achieved by hydrogen reduction to give compounds of Formula (B').

**Scheme 7**

Compounds of Formula (C') can be prepared as shown in Scheme 8. The coupling of the amine (O), which is synthesized as scheme 4, with tetrahydroquinazoline core (T), which is synthesized as scheme 5, gives 2,4-disubstituted amino tetrahydroquinazoline. The deprotection of Boc-group is achieved by an acid to give the amine (C').

**Scheme 8**

The common intermediate (H') of the novel substituted pyrimidines can be prepared as shown in Scheme 9. Commercially available substituted uracil (D'), wherein T and p is as defined above, is converted to substituted 2,4-dihalo-pyrimidines (E') by a halogenating agent with or without a base (wherein X is halogen such as chloro, bromo, or iodo). The halogenating agent includes phosphorous oxychloride (POCl<sub>3</sub>), phosphorous oxybromide (POBr<sub>3</sub>), or phosphorus pentachloride (PCl<sub>5</sub>). The

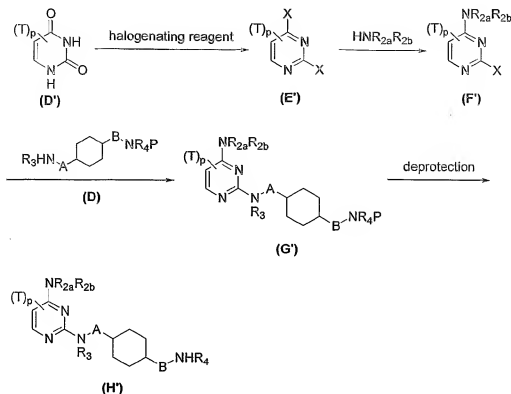
base includes a tertiary amine (preferably *N,N*-diisopropylethylamine, etc.) or an aromatic amine (preferably *N,N*-dimethylaniline, etc.). Reaction temperature ranges from about 100°C to 200°C, preferably about 140°C to 180°C.

- The halogen of 4-position of substituted 2,4-dihalo-pyrimidines (E') is selectively substituted
- 5 by a primary or secondary amine ( $\text{HNR}_{2a}\text{R}_{2b}$ , wherein  $\text{R}_{2a}$  and  $\text{R}_{2b}$  are as defined above) with or without a base in an inert solvent to provide the corresponding 4-substituted amino adduct (F'). The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydroxide (preferably sodium hydroxide, etc.), or a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylnmorpholine, etc.). The inert solvent includes
- 10 lower alkyl alcohol solvents (preferably methanol, ethanol, 2-propanol, or butanol, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane, etc.), or amide solvents (preferably *N,N*-dimethylformamide or 1-methyl-pyrrolidin-2-one, etc.). Reaction temperature ranges from about 0°C to 200°C, preferably about 10°C to 150°C.

- In turn, this is substituted by the mono-protected diamine (D), wherein  $\text{R}_3$ ,  $\text{R}_4$ , A, and B are
- 15 as defined above and P is a protective group, with or without a base in an inert solvent to provide 2,4-disubstituted amino pyrimidines (G'). The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydroxide (preferably sodium hydroxide, etc.), or a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylnmorpholine, etc.). The inert solvent includes lower alkyl alcohol solvents (preferably
- 20 methanol, ethanol, 2-propanol, or butanol, etc.) or amide solvents (preferably *N,N*-dimethylformamide or 1-methyl-pyrrolidin-2-one, etc.). Reaction temperature ranges from about 50°C to 200°C, preferably about 80°C to 150°C. Also this reaction can be carried out under microwave conditions.

- The deprotection of the protective group leads to the common intermediate (H') of the novel
- 25 substituted pyrimidines.

Scheme 9



The conversion of the common intermediate (H') to the novel substituted pyrimidines (I'-M') of the present invention is outlined in Scheme 10.

- The amine (H') is reacted with a carboxylic acid ( $\text{R}_1\text{CO}_2\text{H}$ ) and a dehydrating condensing agent in an inert solvent with or without a base to provide the novel amide (I') of the present invention.
- The dehydrating condensing agent includes dicyclohexylcarbodiimide (DCC), 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride (EDC·HCl), bromo-tris-pyrrolidino-phosonium hexafluorophosphate (PyBroP), *O*-(7-azabenzotriazol-1-yl)-1,1,3,3-tetramethyluronium hexafluorophosphate (HATU), or 1-cyclohexyl-3-methylpolystyrene-carbodiimide. The base includes a tertiary amine (preferably *N,N*-diisopropylethylamine or triethylamine, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), nitrile solvents (preferably acetonitrile, etc.), or amide solvents (preferably *N,N*-dimethylformamide, etc.). In case of need, 1-hydroxybenzotriazole (HOBT),

HOBT-6-carboxaamidomethyl polystyrene, or 1-hydroxy-7-azabenzotriazole (HOAT) can be used as a reactant agent. Reaction temperature ranges from about -20°C to 50°C, preferably about 0°C to 40°C.

- Alternatively, the novel amide (I') of the present invention can be obtained by amidation
- 5 reaction using an acid chloride ( $R_1\text{COCl}$ ) and a base in an inert solvent. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic
- 10 amine (preferably pyridine, imidazole, poly-(4-vinylpyridine), etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), amide solvents (preferably *N,N*-dimethylformamide, etc.), or aromatic solvents (preferably toluene or pyridine, etc.). Reaction temperature ranges from about -20°C to 50°C, preferably about 0°C to 40°C.

- 15 The novel amide (I') of the present invention is reacted with a reducing agent in an inert solvent to provide the novel amine (J') of the present invention. The reducing agent includes alkali metal aluminum hydrides (preferably lithium aluminum hydride), alkali metal borohydrides (preferably lithium borohydride), alkali metal trialkoxyaluminum hydrides (preferably lithium tri-*tert*-butoxyaluminum hydride), dialkylaluminum hydrides (preferably di-isobutylaluminum
- 20 hydride), borane, dialkylboranes (preferably di-isomyl borane), alkali metal trialkylboron hydrides (preferably lithium triethylboron hydride). The inert solvent includes ethereal solvents (preferably tetrahydrofuran or dioxane) or aromatic solvents (preferably toluene, etc.). Reaction temperature ranges from about -78°C to 200°C, preferably about 50°C to 120°C.

- Alternatively, the novel amine (J') of the present invention can be obtained by reductive
- 25 amination reaction using aldehyde ( $R_1\text{CHO}$ ) and a reducing agent in an inert solvent with or without an acid. The reducing agent includes sodium triacetoxyborohydride, sodium cyanoborohydride, sodium borohydride, or boran-pyridine complex, preferably sodium triacetoxyborohydride or sodium cyanoborohydride. The inert solvent includes lower alkyl alcohol solvents (preferably methanol or

- ethanol, etc.), lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), or aromatic solvents (preferably toluene, etc.). The acid includes an inorganic acid (preferably hydrochloric acid or sulfuric acid) or an organic acid (preferably acetic acid). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C. Also this reaction can be carried out under microwave conditions.

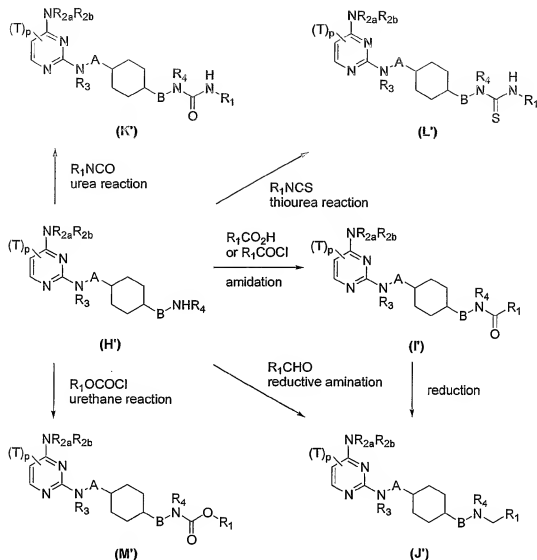
- The novel urea (K') of the present invention can be obtained by urea reaction using an isocyanate ( $R_1NCO$ ) in an inert solvent with or without a base. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine or imidazole, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or polar solvents (preferably *N,N*-dimethylformamide or dimethyl sulfoxide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

- The amine (H') is reacted with an isothiocyanate ( $R_1NCS$ ) in an inert solvent with or without a base to provide the novel thiourea (L') of the present invention. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine or imidazole, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or amide solvents (preferably *N,N*-dimethylformamide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

The novel urethane (M') of the present invention can be obtained by urethane reaction using

$R_1\text{OCOC}l$ , wherein  $X$  is halogen such as chloro, bromo, or iodo, in an inert solvent with or without a base. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methyldmorpholine, etc.), or an aromatic amine (preferably pyridine, imidazole, or poly-(4-vinylpyridine), etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or polar solvents (preferably *N,N*-dimethylformamide or dimethyl sulfoxide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

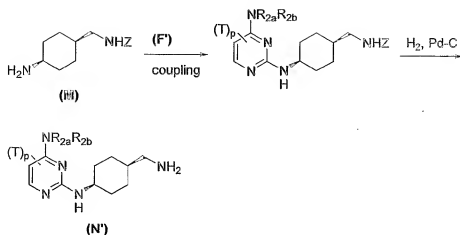
## Scheme 10



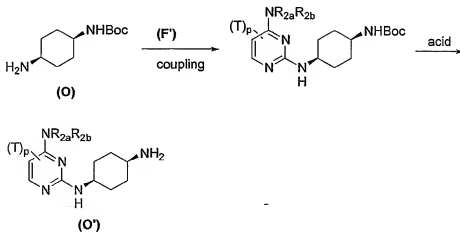
Compounds of Formula (N') can be prepared as shown in Scheme 11. The coupling of the amine (M), which is synthesized as scheme 3, with pyrimidine core (F'), which is synthesized as scheme 9, gives 2,4-disubstituted amino pyrimidine. The deprotection of Z-group is achieved by

5 hydrogen reduction to give compounds of Formula (N').



**Scheme 11**

Compounds of Formula (O') can be prepared as shown in Scheme 12. The coupling of the amine (O), which is synthesized as scheme 4, with pyrimidine core (F'), which is synthesized as scheme 9, gives 2,4-disubstituted amino pyrimidine. The deprotection of Boc-group is achieved by

**Scheme 12**

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an acid to give the amine (O').

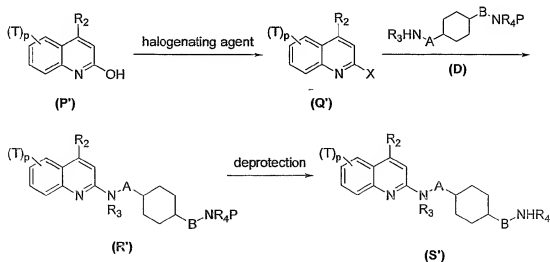
The common intermediate (S') of the novel substituted quinolines can be prepared as shown in Scheme 13. Commercially available substituted 2-hydroxy-quinoline (P'), wherein R<sub>2</sub>, T, and p is

as defined above, is converted to 2-halo-quinolines (Q') by a halogenating agent with or without a base (wherein X is halogen such as chloro, bromo, or iodo). The halogenating agent includes phosphorous oxychloride (POCl<sub>3</sub>), phosphorous oxybromide (POBr<sub>3</sub>), or phosphorus pentachloride (PCl<sub>5</sub>). The base includes a tertiary amine (preferably *N,N*-diisopropylethylamine, etc.) or an aromatic amine (preferably *N,N*-dimethylaniline, etc.). Reaction temperature ranges from about 100°C to 200°C, preferably about 140°C to 180°C.

The halide (Q') is substituted by the mono-protected diamine (D), wherein R<sub>3</sub>, R<sub>4</sub>, A, and B are as defined above and P is a protective group, with or without a base in an inert solvent to provide 2-substituted amino quinoline (R'). The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydroxide (preferably sodium hydroxide, etc.), or a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.). The inert solvent includes lower alkyl alcohol solvents (preferably methanol, ethanol, 2-propanol, or butanol, etc.) or amide solvents (preferably *N,N*-dimethylformamide or 1-methyl-pyrrolidin-2-one, etc.). Reaction temperature ranges from about 50°C to 200°C, preferably about 80°C to 150°C. Also this reaction can be carried out under microwave conditions.

The deprotection of the protective group leads to the common intermediate (S') of the novel substituted quinolines.

### Scheme 13



The conversion of the common intermediate (S') to the novel substituted quinolines (T'-X') of the present invention is outlined in Scheme 14.

The amine (S') is reacted with a carboxylic acid ( $R_1CO_2H$ ) and a dehydrating condensing agent in an inert solvent with or without a base to provide the novel amide (T') of the present invention.

- 5 The dehydrating condensing agent includes dicyclohexylcarbodiimide (DCC), 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride (EDC•HCl), bromo-tris-pyrrolidino-phosonium hexafluorophosphate (PyBroP), *O*-(7-azabenzotriazol-1-yl)-1,1,3,3-tetramethyluronium hexafluorophosphate (HATU), or 1-cyclohexyl-3-methylpolystyrene-carbodiimide. The base includes a tertiary amine (preferably *N,N*-diisopropylethylamine or triethylamine, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), nitrile solvents (preferably acetonitrile, etc.), or amide solvents (preferably *N,N*-dimethylformamide, etc.). In case of need, 1-hydroxybenzotriazole (HOBT), HOBT-6-carboxaamidomethyl polystyrene, or 1-hydroxy-7-azabenzotriazole (HOAT) can be used as
- 15 a reactant agent. Reaction temperature ranges from about -20°C to 50°C, preferably about 0°C to 40°C.

- Alternatively, the novel amide (T') of the present invention can be obtained by amidation reaction using an acid chloride ( $R_1COCl$ ) and a base in an inert solvent. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal
- 20 hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine, imidazole, poly-(4-vinylpyridine), etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal
  - 25 solvents (preferably tetrahydrofuran or dioxane), amide solvents (preferably *N,N*-dimethylformamide, etc.), or aromatic solvents (preferably toluene or pyridine, etc.). Reaction temperature ranges from about -20°C to 50°C, preferably about 0°C to 40°C.

The novel amide (T') of the present invention is reacted with a reducing agent in an inert

solvent to provide the novel amine (U') of the present invention. The reducing agent includes alkali metal aluminum hydrides (preferably lithium aluminum hydride), alkali metal borohydrides (preferably lithium borohydride), alkali metal trialkoxyaluminum hydrides (preferably lithium tri-*tert*-butoxyaluminum hydride), dialkylaluminum hydrides (preferably di-isobutylaluminum hydride), borane, dialkylboranes (preferably di-isoamyl borane), alkali metal trialkylboron hydrides (preferably lithium triethylboron hydride). The inert solvent includes ethereal solvents (preferably tetrahydrofuran or dioxane) or aromatic solvents (preferably toluene, etc.). Reaction temperature ranges from about -78°C to 200°C, preferably about 50°C to 120°C.

Alternatively, the novel amine (U') of the present invention can be obtained by reductive amination reaction using aldehyde ( $R_1CHO$ ) and a reducing agent in an inert solvent with or without an acid. The reducing agent includes sodium triacetoxymethylborohydride, sodium cyanoborohydride, sodium borohydride, or boran-pyridine complex, preferably sodium triacetoxymethylborohydride or sodium cyanoborohydride. The inert solvent includes lower alkyl alcohol solvents (preferably methanol or ethanol, etc.), lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), or aromatic solvents (preferably toluene, etc.). The acid includes an inorganic acid (preferably hydrochloric acid or sulfuric acid) or an organic acid (preferably acetic acid). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C. Also this reaction can be carried out under microwave conditions.

The novel urea (V') of the present invention can be obtained by urea reaction using an isocyanate ( $R_1NCO$ ) in an inert solvent with or without a base. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine or imidazole, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or polar solvents (preferably *N,N*-dimethylformamide or dimethyl sulfoxide, etc.). Reaction temperature ranges from

about -20°C to 120°C, preferably about 0°C to 100°C.

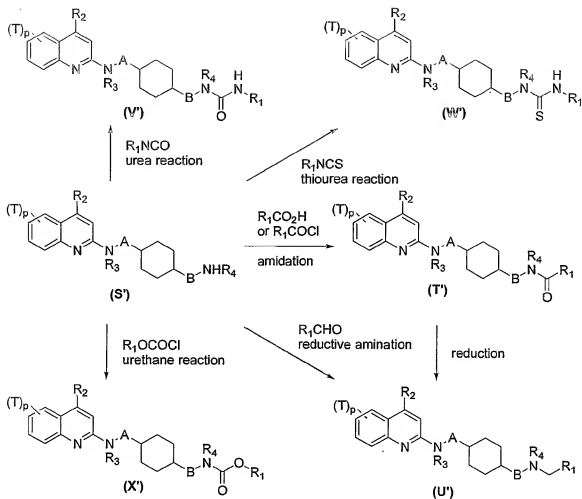
The amine (S') is reacted with a isothiocyanate (R<sub>1</sub>NCS) in an inert solvent with or without a base to provide the novel thiourea (W') of the present invention. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal

- 5 hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine or imidazole, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably
- 10 tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or amide solvents (preferably *N,N*-dimethylformamide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

The novel urethane (X') of the present invention can be obtained by urethane reaction using R<sub>1</sub>OCOCl, wherein X is halogen such as chloro, bromo, or iodo, in an inert solvent with or without a

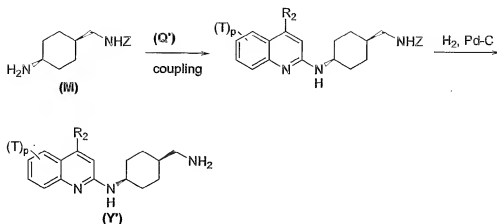
- 15 base. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine, imidazole, or
- 20 poly-(4-vinylpyridine), etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or polar solvents (preferably *N,N*-dimethylformamide or dimethyl sulfoxide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

Scheme 14

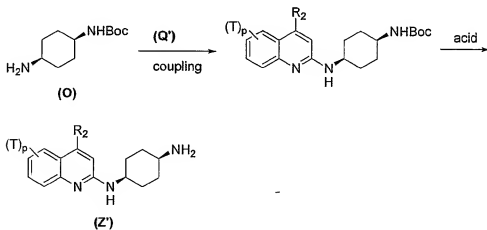


Compounds of Formula (Y') can be prepared as shown in Scheme 15. The coupling of the amine (M), which is synthesized as scheme 3, with quinoline core (Q'), which is synthesized as scheme 13, gives 2-substituted amino quinoline. The deprotection of Z-group is achieved by

5 hydrogen reduction to give compounds of Formula (Y').

**Scheme 15**

Compounds of Formula (Z') can be prepared as shown in Scheme 16. The coupling of the amine (O), which is synthesized as scheme 4, with quinoline core (Q'), which is synthesized as scheme 13, gives 2-substituted amino quinoline. The deprotection of Boc-group is achieved by an

**Scheme 16**

5 acid to give the amine (Z').

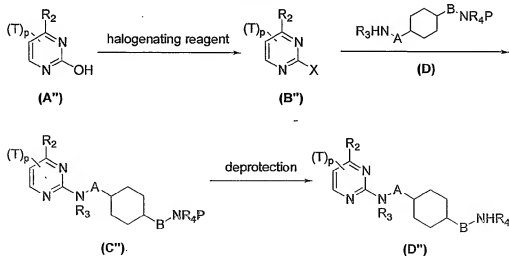
The common intermediate (D'') of the novel substituted pyrimidines can be prepared as shown in Scheme 17. Commercially available substituted 2-hydroxy-pyrimidines (A''), wherein R<sub>2</sub>, T, and p is as defined above, is converted to 2-halo-pyrimidines (B'') by a halogenating agent with or

without a base (wherein X is halogen such as chloro, bromo, or iodo). The halogenating agent includes phosphorous oxychloride ( $\text{POCl}_3$ ), phosphorous oxybromide ( $\text{POBr}_3$ ), or phosphorus pentachloride ( $\text{PCl}_5$ ). The base includes a tertiary amine (preferably *N,N*-diisopropylethylamine, etc.) or an aromatic amine (preferably *N,N*-dimethylaniline, etc.). Reaction temperature ranges from about 100°C to 200°C, preferably about 140°C to 180°C.

The halide ( $\text{B}''$ ) is substituted by the mono-protected diamine (D), wherein  $\text{R}_3$ ,  $\text{R}_4$ , A, and B are as defined above and P is a protective group, with or without a base in an inert solvent to provide 2-substituted amino pyrimidine ( $\text{C}''$ ). The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydroxide (preferably sodium hydroxide, etc.), or a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.). The inert solvent includes lower alkyl alcohol solvents (preferably methanol, ethanol, 2-propanol, or butanol, etc.) or amide solvents (preferably *N,N*-dimethylformamide or 1-methyl-pyrrolidin-2-one, etc.). Reaction temperature ranges from about 50°C to 200°C, preferably about 80°C to 150°C. Also this reaction can be carried out under microwave conditions.

The deprotection of the protective group leads to the common intermediate ( $\text{D}''$ ) of the novel substituted pyrimidines.

### Scheme 17





The conversion of the common intermediate (D'') to the novel substituted pyrimidines (E''-I'') of the present invention is outlined in Scheme 18.

The amine (D'') is reacted with a carboxylic acid ( $R_1CO_2H$ ) and a dehydrating condensing agent in an inert solvent with or without a base to provide the novel amide (E'') of the present invention. The dehydrating condensing agent includes dicyclohexylcarbodiimide (DCC), 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride (EDC·HCl), bromo-tris-pyrrolidino-phosmium hexafluorophosphate (PyBroP), *O*-(7-azabenzotriazol-1-yl)-1,1,3,3-tetramethyluronium hexafluorophosphate (HATU), or 1-cyclohexyl-3-methylpolystyrene-carbodiimide. The base includes a tertiary amine (preferably *N,N*-diisopropylethylamine or triethylamine, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), nitrile solvents (preferably acetonitrile, etc.), or amide solvents (preferably *N,N*-dimethylformamide, etc.). In case of need, 1-hydroxybenzotriazole (HOBt), HOBt-6-carboxamidomethyl polystyrene, or 1-hydroxy-7-azabenzotriazole (HOAT) can be used as a reactant agent. Reaction temperature ranges from about -20°C to 50°C, preferably about 0°C to 40°C.

Alternatively, the novel amide (E'') of the present invention can be obtained by amidation reaction using an acid chloride ( $R_1COCl$ ) and a base in an inert solvent. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine, imidazole, poly-(4-vinylpyridine), etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), amide solvents (preferably *N,N*-dimethylformamide, etc.), or aromatic solvents (preferably toluene or pyridine, etc.). Reaction temperature ranges from about -20°C to 50°C, preferably about 0°C to 40°C.

The novel amide (E'') of the present invention is reacted with a reducing agent in an inert

solvent to provide the novel amine (F'') of the present invention. The reducing agent includes alkali metal aluminum hydrides (preferably lithium aluminum hydride), alkali metal borohydrides (preferably lithium borohydride), alkali metal trialkoxyaluminum hydrides (preferably lithium tri-*tert*-butoxyaluminum hydride), dialkylaluminum hydrides (preferably di-isobutylaluminum hydride), borane, dialkylboranes (preferably di-isopropyl borane), alkali metal trialkylboron hydrides (preferably lithium triethylboron hydride). The inert solvent includes ethereal solvents (preferably tetrahydrofuran or dioxane) or aromatic solvents (preferably toluene, etc.). Reaction temperature ranges from about -78°C to 200°C, preferably about 50°C to 120°C.

Alternatively, the novel amine (F'') of the present invention can be obtained by reductive amination reaction using aldehyde ( $R_1CHO$ ) and a reducing agent in an inert solvent with or without an acid. The reducing agent includes sodium triacetoxyborohydride, sodium cyanoborohydride, sodium borohydride, or boran-pyridine complex, preferably sodium triacetoxyborohydride or sodium cyanoborohydride. The inert solvent includes lower alkyl alcohol solvents (preferably methanol or ethanol, etc.), lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), or aromatic solvents (preferably toluene, etc.). The acid includes an inorganic acid (preferably hydrochloric acid or sulfuric acid) or an organic acid (preferably acetic acid). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C. Also this reaction can be carried out under microwave conditions.

The novel urea (G'') of the present invention can be obtained by urea reaction using an isocyanate ( $R_1NCO$ ) in an inert solvent with or without a base. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine or imidazole, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or polar solvents (preferably *N,N*-dimethylformamide or dimethyl sulfoxide, etc.). Reaction temperature ranges from

about -20°C to 120°C, preferably about 0°C to 100°C.

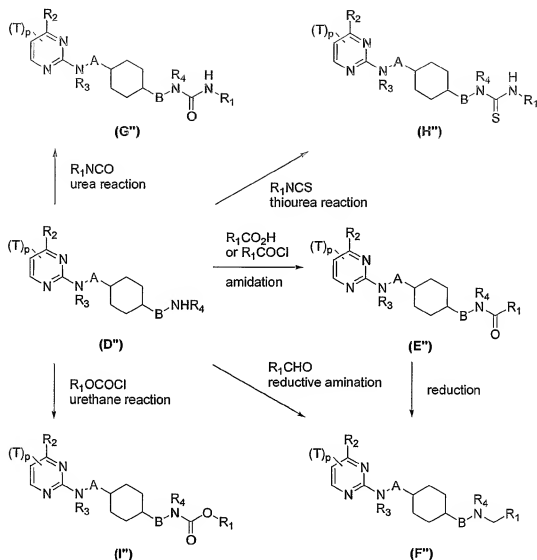
The amine (D'') is reacted with an isothiocyanate (R<sub>1</sub>NCS) in an inert solvent with or without a base to provide the novel thiourea (H'') of the present invention. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal

- 5 hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine or imidazole, etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably
- 10 tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or amide solvents (preferably *N,N*-dimethylformamide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

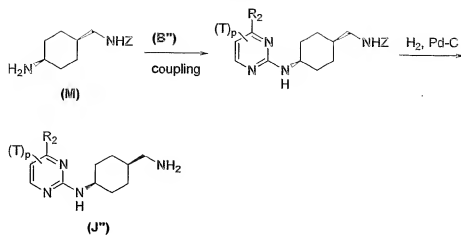
The novel urethane (I'') of the present invention can be obtained by urethane reaction using R<sub>2</sub>OCOCl, wherein X is halogen such as chloro, bromo, or iodo, in an inert solvent with or without a

- 15 base. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydrogencarbonate (preferably sodium hydrogencarbonate or potassium hydrogencarbonate, etc.), an alkali hydroxide (preferably sodium hydroxide or potassium hydroxide, etc.), a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methylmorpholine, etc.), or an aromatic amine (preferably pyridine, imidazole, or
- 20 poly-(4-vinylpyridine), etc.). The inert solvent includes lower halocarbon solvents (preferably dichloromethane, dichloroethane, or chloroform, etc.), ethereal solvents (preferably tetrahydrofuran or dioxane), aromatic solvents (preferably benzene or toluene, etc.), or polar solvents (preferably *N,N*-dimethylformamide or dimethyl sulfoxide, etc.). Reaction temperature ranges from about -20°C to 120°C, preferably about 0°C to 100°C.

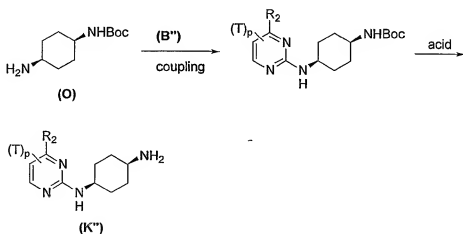
## Scheme 18



Compounds of Formula (J'') can be prepared as shown in Scheme 19. The coupling of the amine (M), which is synthesized as scheme 3, with pyrimidine core (B''), which is synthesized as scheme 17, gives 2-substituted amino pyrimidine. The deprotection of Z-group is achieved by 5 hydrogen reduction to give compounds of Formula (J'').

**Scheme 19**

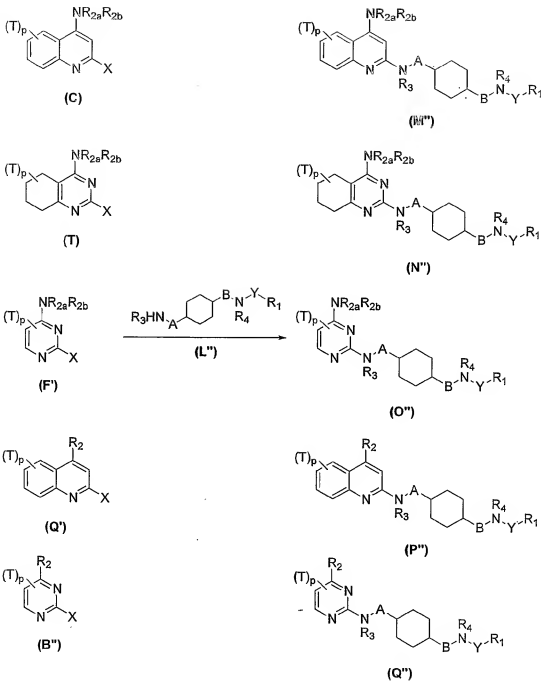
Compounds of Formula (K'') can be prepared as shown in Scheme 20. The coupling of the amine (O), which is synthesized as scheme 4, with pyrimidine core (B''), which is synthesized as 5 scheme 17, gives 2-substituted amino pyrimidine. The deprotection of Boc-group is achieved by an acid to give the amine (K'').

**Scheme 20**

Alternatively, the novel quinoline (M''), the novel tetrahydroquinazoline (N''), the novel pyrimidine (O''), the novel quinoline (P''), and the novel pyrimidine (Q'') of the present invention are

- directly synthesized from the quinoline core (C), which is synthesized in Scheme 1, the tetrahydroquinazoline core (T), which is synthesized in Scheme 5, the pyrimidine core (F'), which is synthesized in Scheme 9, the quinoline core (Q'), which is synthesized in Scheme 13, and the pyrimidine core (B''), which is synthesized in Scheme 17, as shown in Scheme 21. This coupling is
- 5 performed with or without a base in an inert solvent. The base includes an alkali metal carbonate (preferably sodium carbonate or potassium carbonate, etc.), an alkali metal hydroxide (preferably sodium hydroxide, etc.), or a tertiary amine (preferably *N,N*-diisopropylethylamine, triethylamine, or *N*-methymorpholine, etc.). The inert solvent includes lower alkyl alcohol solvents (preferably methanol, ethanol, 2-propanol, or butanol, etc.) or amide solvents (preferably
- 10 *N,N*-dimethylformamide or 1-methyl-pyrrolidin-2-one, etc.). Reaction temperature ranges from about 50°C to 200°C, preferably about 80°C to 180°C. Also this reaction can be carried out under microwave conditions.

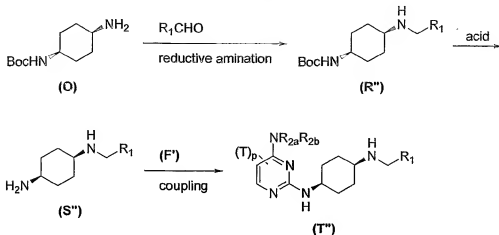
## Scheme 21



For example, compounds of Formula (T'') can be prepared as shown in Scheme 22. The amine (O), which is synthesized in Scheme 4, is subjected to reductive amination by aldehyde ( $\text{R}_1\text{CHO}$ ). The deprotection of Boc-group is achieved by an acid to give the amine. The coupling of

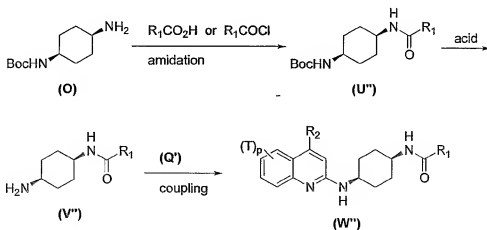
the amine with pyrimidine core (F'), which is synthesized as scheme 9, gives the novel pyrimidine (T'') of the present invention.

Scheme 22



Compounds of Formula (W'') can be prepared as shown in Scheme 23. The amine (O), which is synthesized in Scheme 4, is subjected to amidation by carboxylic acid (R<sub>1</sub>CO<sub>2</sub>H) or acid chloride (R<sub>1</sub>COCl). The deprotection of Boc-group is achieved by an acid to give the amine. The coupling of the amine with quinoline core (Q'), which is synthesized as scheme 13, gives the novel

Scheme 23

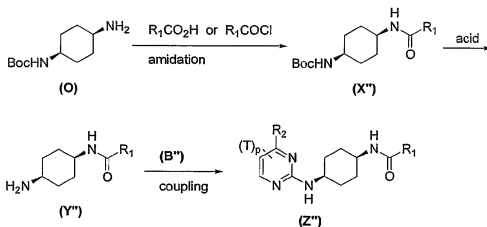


quinoline (W'') of the present invention.



Compounds of Formula (Z'') can be prepared as shown in Scheme 24. The amine (O), which is synthesized in Scheme 4, is subjected to amidation by carboxylic acid ( $R_1CO_2H$ ) or acid chloride ( $R_1COCl$ ). The deprotection of Boc-group is achieved by an acid to give the amine. The coupling of the amine with pyrimidine core (B''), which is synthesized as scheme 17, gives the novel pyrimidine (Z'') of the present invention.

Scheme 24



When a compound of the invention contains optical isomers, stereoisomers, regio isomers, rotational isomers, a single substance and a mixture of them are included as a compound of the invention. For example, when a chemical formula is represented as showing no stereochemical designation(s), such as Formula VI, then all possible stereoisomer, optical isomers and mixtures thereof are considered within the scope of that formula. Accordingly, Formula VII, specifically designates the cis relationship between the two amino groups on the cyclohexyl ring and therefore this formula is also fully embraced by Formula VI.

15

Other uses of the disclosed invention will become apparent to those in the art based upon, inter alia, a review of this patent document.

The following examples are given to illustrate the invention and are not intended to be inclusive in any manner:

### Examples

The compounds of the invention and their synthesis are further illustrated by the following examples. The following examples are provided to further define the invention without, however, limiting the invention to the particulars of these examples. "Ambient temperature" as referred to in the following example is meant to indicate a temperature falling between 0 °C and 40 °C. The following compounds are named by Beilstein Auto Nom Version 4.0, CS Chem Draw Ultra Version 6.0, CS Chem Draw Ultra Version 6.0.2, CS Chem Draw Ultra Version 7.0.1, or ACD Name Version 7.0.

Abbreviations used in the instant specification, particularly the Schemes and Examples, are as follows:

- <sup>1</sup>H NMR : proton nuclear magnetic resonance spectrum
- AcOH : acetic acid
- APCI : atmospheric pressure chemical ionization
- 15 (Boc)<sub>2</sub>O : di-tertiary-butyl dicarbonate
- BuLi : butyl lithium
- BuOH : butanol
- Cbz : carbobenzoxy
- CDCl<sub>3</sub> : deuterated chloroform
- 20 CH<sub>2</sub>Cl<sub>2</sub> : dichloromethane
- CHCl<sub>3</sub> : chloroform
- CI : chemical ionization
- mCPBA: meta chloroperbenzoic acid
- DMA: N,N-dimethyl acetamide
- 25 DCM : dichloromethane
- DIEA : diisopropylethylamine
- DMSO : dimethyl sulfoxide
- Dppf: bis-(diphenylphosphino)ferrocene

- Et : electron ionization
- ESI : electrospray ionization
- Et<sub>2</sub>O : diethyl ether
- EtOAc : acetic acid ethyl ester
- 5 EtOH : ethanol
- FAB : fast atom bombardment
- HATU : *O*-(7-azabenzotriazol-1-yl)-*N,N,N',N'*-tetramethyluronium-Hexafluorophosphate
- H<sub>2</sub>SO<sub>4</sub> : sulfuric acid
- 10 HCl : hydrogen chloride
- IPA: isopropanol
- K<sub>2</sub>CO<sub>3</sub> : potassium carbonate
- Me<sub>2</sub>NH : dimethylamine
- MeNH<sub>2</sub> : methylamine
- 15 MeOH : methanol
- MgSO<sub>4</sub> : magnesium sulfate
- MsOH : methanesulfonic acid
- NaBH(OAc)<sub>3</sub> : sodium triacetoxymborohydride
- NaBH<sub>3</sub>CN : sodium cyanoborohydride
- 20 NaBH<sub>4</sub> : sodium borohydride
- NaHCO<sub>3</sub> : sodium hydrogencarbonate
- Pd/C : palladium carbon
- POCl<sub>3</sub> : phosphoryl chloride
- PVP : poly(4-vinylpyridine)
- 25 SOCl<sub>2</sub> : thionyl chloride
- TBME: tert-butyl methyl ether
- TFA : trifluoroacetic acid
- THF : tetrahydrofuran

ZCl : benzyloxycarbonyl chloride

s : singlet

d : doublet

t : triplet

5 q : quartet

dd : doublet doublet

dt : doublet triplet

ddd : doublet doublet doublet

brs : broad singlet

10 m : multiplet

*J* : coupling constant

Hz : Hertz

## 15 Example 1

***N*<sup>2</sup>-[*cis*-4-(4-Bromo-2-trifluoromethoxy-benzyl)-amino-cyclohexyl]-*N*<sup>4</sup>-methyl-quinoline-2,4-diamine dihydrochloride**

### Step A: Synthesis of 2,4-dichloro-quinoline.

- 20 A suspension of quinoline-2,4-diol (150 g, 931 mmol) in POCl<sub>3</sub> (975 mL, 10.4 mol) was stirred at reflux for 6 hr and the reaction mixture was concentrated. The residue was diluted with CHCl<sub>3</sub> (500 mL) and the solution was poured into ice water. The aqueous layer was extracted with CHCl<sub>3</sub> (three times). The combined organic layer was dried over MgSO<sub>4</sub>, filtrated, concentrated, and purified by flash chromatography (silica gel, 20% EtOAc in hexane) to give 2,4-dichloro-quinoline
- 25 (177 g, 96%) as a pale brown solid.

EI MS *m/e* 197, M<sup>+</sup>; <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) δ 7.50 (s, 1 H), 7.65 (ddd, *J* = 8.3, 7.0, 1.3 Hz, 1 H), 7.79 (ddd, *J* = 8.5, 7.0, 1.3 Hz, 1 H), 8.00-8.06 (m, 1 H), 8.16-8.21 (m, 1 H).

**Step B: Synthesis of (2-chloro-quinolin-4-yl)-methyl-amine.**

To a solution of 2,4-dichloro-quinoline (29.8 g, 150 mmol) in THF (300 mL) was added 40% MeNH<sub>2</sub> in water (58.4 g, 752 mmol). The mixture was stirred at ambient temperature for 12 days and concentrated. The residue was suspended in CHCl<sub>3</sub> and H<sub>2</sub>O. The precipitate was collected by

- 5 filtration, washed with acetone, and dried at 50 °C under reduced pressure to give (2-chloro-quinolin-4-yl)-methyl-amine (13.2 g, 45%) as a colorless solid.

ESI MS *m/e* 215, *M* + Na<sup>+</sup>; <sup>1</sup>H NMR (300 MHz, DMSO-*d*<sub>6</sub>) δ 2.91 (d, *J* = 4.7 Hz, 3 H), 6.35 (s, 1 H), 7.47 (ddd, *J* = 8.3, 6.6, 1.7 Hz, 1 H), 7.62-7.75 (m, 3 H), 8.16 (d, *J* = 8.6 Hz, 1 H).

10 **Step C: Synthesis of (*cis*-4-benzoyloxycarbonylamino-cyclohexyl)-carbamic acid- benzyl ester.**

To a suspension of *cis*-cyclohexane-1,4-dicarboxylic acid (25.0 g, 145 mmol) in benzene (125 mL) were added phosphorazidic acid diphenyl ester (81.9 g, 298 mmol) and triethylamine (30.1 g, 297 mmol). The reaction mixture was stirred at reflux for 2.5 hr. Benzyl alcohol (32.2 g, 298 mmol) was added and the mixture was stirred at reflux for 24 hr. The reaction mixture was concentrated and the

- 15 residue was dissolved in EtOAc and H<sub>2</sub>O. The organic layer was separated and the aqueous layer was extracted with EtOAc (twice). The combined organic layer was washed with 1 M aqueous KHSO<sub>4</sub>, saturated aqueous NaHCO<sub>3</sub>, and brine, dried over MgSO<sub>4</sub>, filtrated, concentrated, and purified by flash chromatography (silica gel, 33% EtOAc in hexane) to give (*cis*-4-benzoyloxycarbonylamino-cyclohexyl)-carbamic acid benzyl ester (52.0 g, 94%) as a colorless oil.

- 20 ESI MS *m/e* 405, *M* + Na<sup>+</sup>; <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) δ 1.45-1.60 (m, 4 H), 1.60-1.80 (m, 4 H), 3.52-3.80 (m, 2 H), 4.70-5.00 (m, 2 H), 5.07 (s, 4 H), 7.15-7.40 (m, 10 H).

**Step D: Synthesis of (*cis*-4-amino-cyclohexyl)-carbamic acid *tert*-butyl ester.**

To a solution of (*cis*-4-benzoyloxycarbonylamino-cyclohexyl)-carbamic acid benzyl ester (91.7 g, 240 mmol) in MeOH (460 mL) was added 5% Pd/C (9.17 g). The reaction mixture was stirred at ambient temperature under hydrogen atmosphere for 2.5 days, filtrated through a pad of celite, and concentrated to give a diamine as a colorless oil. To a solution of the diamine in MeOH (550 mL) was added a solution of (Boc)<sub>2</sub>O (6.59 g, 30.2 mmol) in MeOH (80 mL) dropwise over 4 hr.

- The reaction mixture was stirred at ambient temperature for 1.5 days and concentrated. After dissolution with  $\text{H}_2\text{O}$ , the aqueous layer was extracted with  $\text{CHCl}_3$  (three times). The combined organic layer was dried over  $\text{MgSO}_4$ , filtrated, and concentrated to give (*cis*-4-amino-cyclohexyl)-carbamic acid *tert*-butyl ester (7.78 g, 15%, crude) as a colorless oil. The aqueous layer was
- 5 concentrated and the residue was dissolved in MeOH, dried over  $\text{MgSO}_4$ , filtrated, and concentrated to give a recovered diamine (32.9 g) as a colorless oil. To a solution of the recovered diamine (32.9 g, 288 mmol) in MeOH (660 mL) was added a solution of  $(\text{Boc})_2\text{O}$  (6.29 g, 28.8 mmol) in MeOH (80 mL) dropwise over 5 hr. The reaction mixture was stirred at ambient temperature for 10 hr and concentrated. After dissolution with  $\text{H}_2\text{O}$ , the aqueous layer was extracted with  $\text{CHCl}_3$  (three times).
- 10 The combined organic layer was dried over  $\text{MgSO}_4$ , filtrated, and concentrated to give (*cis*-4-amino-cyclohexyl)-carbamic acid *tert*-butyl ester (8.16 g, 16%, crude) as a colorless oil. The aqueous layer was concentrated and the residue was dissolved in MeOH, dried over  $\text{MgSO}_4$ , filtrated, and concentrated to give a recovered diamine (23.1 g) as a colorless oil. To a solution of the recovered diamine (23.1 g, 202 mmol) in MeOH (462 mL) was added a solution of  $(\text{Boc})_2\text{O}$  (4.42 g, 20.3 mmol)
- 15 in MeOH (56 mL) dropwise over 4 hr. The reaction mixture was stirred at ambient temperature for 3.5 days and concentrated. After dissolution with  $\text{H}_2\text{O}$ , the aqueous layer was extracted with  $\text{CHCl}_3$  (three times). The combined organic layer was dried over  $\text{MgSO}_4$ , filtrated, and concentrated to give (*cis*-4-amino-cyclohexyl)-carbamic acid *tert*-butyl ester (5.01 g, 10% based on starting material) as a colorless oil. The aqueous layer was concentrated and the residue was dissolved in MeOH, dried over
- 20  $\text{MgSO}_4$ , filtrated, and concentrated to give a recovered diamine (16.0 g) as a colorless oil. To a solution of the recovered diamine (16.0 g, 140 mmol) in MeOH (320 mL) was added a solution of  $(\text{Boc})_2\text{O}$  (3.06 g, 14.0 mmol) in MeOH (40 mL) dropwise over 4 hr. The reaction mixture was stirred at ambient temperature for 13 hr and concentrated. After dissolution with  $\text{H}_2\text{O}$ , the aqueous layer was extracted with  $\text{CHCl}_3$  (three times). The combined organic layer was dried over  $\text{MgSO}_4$ , filtrated, and
- 25 concentrated to give (*cis*-4-amino-cyclohexyl)-carbamic acid *tert*-butyl ester (3.53 g, 7% based on the starting material) as a colorless oil. The aqueous layer was concentrated and the residue was dissolved in MeOH, dried over  $\text{MgSO}_4$ , filtrated, and concentrated to give a recovered diamine (11.1 g) as a colorless oil.

ESI MS  $m/e$  215,  $M + H^+$ ;  $^1H$  NMR (300 MHz,  $CDCl_3$ )  $\delta$  1.20-1.80 (m, 8 H), 1.44 (s, 9 H), 2.78-2.95 (m, 1 H), 3.50-3.80 (m, 1 H), 4.30-4.82 (m, 1 H).

**Step E: Synthesis of  $N^2$ -(*cis*-4-amino-cyclohexyl)- $N^4$ -methyl-quinoline-2,4-diamine.**

- 5 A mixture of (2-chloro-quinolin-4-yl)-methyl-amine (2.00 g, 10.4 mmol) and (*cis*-4-amino-cyclohexyl)-carbamic acid *tert*-butyl ester (2.45 g, 11.4 mmol) in butanol (3 mL) was stirred at 130 °C for 2 days in a sealed tube. The reaction mixture was poured into saturated aqueous  $NaHCO_3$  and the aqueous layer was extracted with  $CHCl_3$  (three times). The combined organic layer was dried over  $MgSO_4$ , filtrated, concentrated, and purified by medium-pressure liquid chromatography (NH-silica
- 10 gel, 20% EtOAc in hexane) to give [*cis*-4-(4-methylamino-quinolin-2-ylamino)-cyclohexyl]-carbamic acid *tert*-butyl ester (1.45 g) as a pale yellow oil. To a solution of the above material (1.31 g) in EtOAc (15 mL) was added 4 M hydrogen chloride in EtOAc (30 mL). The reaction mixture was stirred at ambient temperature for 5 hr. The precipitate was collected by filtration and dissolved in saturated aqueous  $NaHCO_3$ . The aqueous layer was extracted with  $CHCl_3$  (three times). The combined organic
- 15 layer was dried over  $MgSO_4$ , filtrated, and concentrated to give  $N^2$ -(*cis*-4-amino-cyclohexyl)- $N^4$ -methyl-quinoline-2,4-diamine (999 mg, 40%) as a pale yellow solid.

EI MS  $m/e$  271  $M + H^+$ ;  $^1H$  NMR (300 MHz,  $DMSO-d_6$ )  $\delta$  1.42-1.92 (m, 8 H), 2.81 (d,  $J = 4.7$  Hz, 3 H), 2.89-3.01 (m, 1 H), 3.17 (s, 2 H), 4.07 (brs, 1 H), 5.77 (s, 1 H), 6.32 (d,  $J = 6.5$  Hz, 1 H), 6.69-6.80 (m, 1 H), 6.94-7.06 (m, 1 H), 7.34 (d,  $J = 3.7$  Hz, 2 H), 7.85 (d,  $J = 8.2$  Hz, 1 H).

20

**Step F: Synthesis of 4-bromo-2-trifluoromethoxy-benzaldehyde.**

- A solution of 4-bromo-1-iodo-2-trifluoromethoxy-benzene (1.00 g, 2.72 mmol) in THF (15 mL) was cooled to -78 °C and 2.66 M BuLi in hexane (2.05 mL, 5.44 mmol) was added dropwise. The reaction mixture was stirred at -78 °C for 1.5 h and *N*-formylmorpholine (0.57 mL, 5.63 mmol)
- 25 was added. The reaction mixture was stirred at -78 °C for 15 min and at ambient temperature for 80 min. The reaction was quenched with 0.25 M aqueous citric acid (10 mL) and the resulting mixture was extracted with EtOAc (three times). The combined organic layer was dried over  $MgSO_4$ , filtrated, concentrated, and purified by flash chromatography (silica gel, 2% to 5% EtOAc in hexane) to give

4-bromo-2-trifluoromethoxy-benzaldehyde (560 mg, 77%) as a pale brown solid.

CI MS  $m/e$  269,  $M + H^+$ ;  $^1H$  NMR (300 MHz,  $CDCl_3$ )  $\delta$  7.50-7.67 (m, 2 H), 7.85 (d,  $J = 8.1$  Hz, 1 H), 10.33 (s, 1 H).

**5 Step G: Synthesis of  $N^2$ -[*cis*-4-(4-bromo-2-trifluoromethoxy-benzyl)-amino-cyclohexyl]- $N^4$ -methyl-quinoline-2,4-diamine dihydrochloride.**

- To a solution of  $N^2$ -(*cis*-4-amino-cyclohexyl)- $N^4$ -methyl-quinoline-2,4-diamine (370 mg, 1.37 mmol) in methanol (4 mL) were added 4-bromo-2-trifluoromethoxy-benzaldehyde (368 mg, 1.37 mmol), acetic acid (82 mg, 1.37 mmol), and  $NaBH_3CN$  (129 mg, 2.05 mmol). The reaction mixture
- 10 was stirred at ambient temperature for 20 hr. The reaction was quenched with saturated aqueous  $NaHCO_3$  and the aqueous layer was extracted with  $CHCl_3$  (three times). The combined organic layer was dried over  $MgSO_4$ , filtrated, concentrated, and purified by medium-pressure liquid chromatography (NH-silica gel, 20% EtOAc in hexane) and flash chromatography (silica gel, 5% MeOH in  $CHCl_3$ ) to give a colorless oil. To a solution of the above oil in EtOAc (2 mL) was added
- 15 4 M hydrogen chloride in EtOAc (5 mL). The mixture was stirred at ambient temperature for 1 hr and concentrated. A suspension of the residue in  $Et_2O$  (12 mL) was stirred at ambient temperature for 1 hr. The precipitate was collected by filtration, washed with  $Et_2O$ , and dried under reduced pressure to give  $N^2$ -[*cis*-4-(4-bromo-2-trifluoromethoxy-benzyl)-amino-cyclohexyl]- $N^4$ -methyl-quinoline-2,4-diamine dihydrochloride (365 mg, 45%) as a white solid.
- 20 ESI MS  $m/e$  523,  $M$  (free) +  $H^+$ ;  $^1H$  NMR (300 MHz,  $DMSO-d_6$ )  $\delta$  1.61-2.11 (m, 8 H), 2.96 (d,  $J = 4.4$  Hz, 3 H), 3.19-3.41 (m, 2 H), 4.11-4.34 (m, 2 H), 5.92 (brs, 1 H), 7.40 (t,  $J = 8.2$  Hz, 1 H), 7.63-7.79 (m, 3 H), 7.93 (d,  $J = 8.4$  Hz, 1 H), 8.22 (d,  $J = 8.2$  Hz, 1 H), 8.30-8.48 (m, 2 H), 9.59 (brs, 2 H).

25

**Example 2**

$N^2$ -[*cis*-4-[2-(4-Bromo-2-trifluoromethoxy-phenyl)-ethylamino]-cyclohexyl]- $N^4$ -methyl-quinoline-2,4-diamine dihydrochloride



**Step A: Synthesis of (4-bromo-2-trifluoromethoxy-phenyl)-acetaldehyde.**

- To a suspension of (methoxymethyl)-triphenylphosphonium chloride (5.29 g, 14.9 mol) in Et<sub>2</sub>O (50 mL) was added 1.8 M phenyl lithium in 30% Et<sub>2</sub>O in cyclohexane (8.58 mL, 15.5 mmol).
- 5 The mixture was stirred at ambient temperature for 10 min. To the reaction mixture was added 4-bromo-2-trifluoromethoxy-benzaldehyde obtained in step F of example 1 (4.00 g, 14.9 mmol) in Et<sub>2</sub>O (18 mL). The mixture was stirred at ambient temperature for 4 hr, filtrated and concentrated. To the above residue was added 10% H<sub>2</sub>SO<sub>4</sub> in AcOH (40 mL). The mixture was stirred at ambient temperature for 90 min. The solution was poured into H<sub>2</sub>O and the aqueous layer was extracted with
- 10 CHCl<sub>3</sub> (three times). The combined organic layer was washed with saturated aqueous NaHCO<sub>3</sub> and brine, dried over MgSO<sub>4</sub>, filtrated, concentrated, and purified by flash chromatography (silica gel, 9% EtOAc in hexane) to give (4-bromo-2-trifluoromethoxy-phenyl)-acetaldehyde (1.25 g, 30 %) as a pale brown oil.
- ESI MS *m/e* 284, M + H<sup>+</sup>; <sup>1</sup>H NMR (200 MHz, CDCl<sub>3</sub>) δ 3.75 (d, *J* = 1.5 Hz, 2 H), 7.16 (d, *J* = 8.4
- 15 Hz, 1 H), 7.41-7.51 (m, 2 H), 9.74 (t, *J* = 1.5 Hz, 1 H).

**Step B: Synthesis of *N*<sup>2</sup>-{*cis*-4-[2-(4-bromo-2-trifluoromethoxy-phenyl)-ethylamino]-cyclohexyl]-*N*<sup>4</sup>-methyl-quinoline-2,4-diamine dihydrochloride.**

- Using the procedure for the step G of example 1, the title compound was obtained.
- 20 ESI MS *m/e* 537, M (free) + H<sup>+</sup>; <sup>1</sup>H NMR (300 MHz, DMSO-*d*<sub>6</sub>) δ 1.62-2.06 (m, 8 H), 2.96 (d, *J* = 4.4 Hz, 3 H), 3.04-3.39 (m, 5 H), 4.17 (brs, 1 H), 5.90 (brs, 1 H), 7.40 (t, *J* = 8.2 Hz, 1 H), 7.52 (d, *J* = 8.7 Hz, 1 H), 7.57-7.85 (m, 3 H), 8.20 (d, *J* = 8.2 Hz, 1 H), 8.26-8.47 (m, 2 H), 9.23 (brs, 2 H).

**25 Example 3**

*N*<sup>2</sup>-{*cis*-4-[(4-Bromo-2-trifluoromethoxy-benzyl)-amino-methyl]-cyclohexyl]-*N*<sup>4</sup>-methyl-quinoline-2,4-diamine dihydrochloride

**Step A: Synthesis of (*cis*-4-hydroxymethyl-cyclohexyl)-carbamic acid *tert*-butyl ester.**

- A suspension of *cis*-4-amino-cyclohexanecarboxylic acid (244 g, 1.70 mol) in MeOH (2.45 L) was cooled to  $-8^{\circ}\text{C}$ . Thionyl chloride (45.0 mL, 617 mmol) was added dropwise. The resulting solution was stirred at ambient temperature for 4.5 hr and concentrated to give a white solid. To a suspension of the above solid in  $\text{CHCl}_3$  (3.00 L) were added triethylamine (261 mL, 1.87 mol) and (Boc) $_2$ O (409 g, 1.87 mol) successively. The reaction mixture was stirred at ambient temperature for 5 hr and poured into water. The aqueous layer was extracted with  $\text{CHCl}_3$  (three times). The combined organic layer was dried over  $\text{MgSO}_4$ , filtrated, concentrated, and purified by flash chromatography (silica gel,  $\text{CHCl}_3$  only to 10% MeOH in  $\text{CHCl}_3$ ) to give a colorless oil (531 g). To a suspension cooled at  $-4^{\circ}\text{C}$  of lithium aluminum hydride (78.3 g, 2.06 mol) in  $\text{Et}_2\text{O}$  (7.9 L) was added a solution of the above oil (530.9 g) in  $\text{Et}_2\text{O}$  (5.3 L) below  $0^{\circ}\text{C}$ . The resulting suspension was stirred at ambient temperature for 2 hr. The reaction mixture was cooled on an ice-bath, quenched with cold water, and filtrated through a pad of celite. The filtrate was dried over  $\text{MgSO}_4$ , filtrated, and concentrated. The precipitate was suspended in hexane (300 mL), filtrated, washed with hexane, and dried under reduced pressure to give (*cis*-4-hydroxymethyl-cyclohexyl)-carbamic acid *tert*-butyl ester (301 g, 77%) as a white solid.
- ESI MS  $m/e$  252,  $\text{M} + \text{Na}^+$ ;  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ )  $\delta$  1.16-1.36 (m, 2 H), 1.45 (s, 9 H), 1.52-1.77 (m, 7 H), 3.51 (d,  $J = 6.2$  Hz, 2 H), 3.75 (brs, 1 H), 4.30-4.82 (m, 1 H).

**20 Step B: Synthesis of [*cis*-4-(benzyloxycarbonylamino-methyl)-cyclohexyl]-carbamic acid *tert*-butyl ester.**

- To a solution of (*cis*-4-hydroxymethyl-cyclohexyl)-carbamic acid *tert*-butyl ester (17.7 g, 77.2 mmol) in THF (245 mL) were added triphenylphosphine (20.2 g, 77.0 mmol) and phthalimide (11.4 g, 77.5 mmol) successively. The resulting suspension was cooled on an ice-bath and 40% diethyl azodicarboxylate in toluene (33.6 mL, 74.1 mmol) was added over 1 hr. The reaction mixture was stirred at ambient temperature for 2.5 days, concentrated, and purified by flash chromatography (silica gel, 33% EtOAc in hexane) to give a white solid. To a suspension of the above solid (27.5 g) in EtOH (275 mL) was added hydrazine hydrate (5.76 g, 115 mmol). The mixture was stirred at reflux